Catalog

Bible Book

## Patent Erasible Surface.

Patented October 24th, 1865.

USE A SOFT PENCIL, AND ERASE WITH MOISTURE.

Harrison G. Dyar

1883-86

H. G. Dyar.

Catalogue of described caterpillars

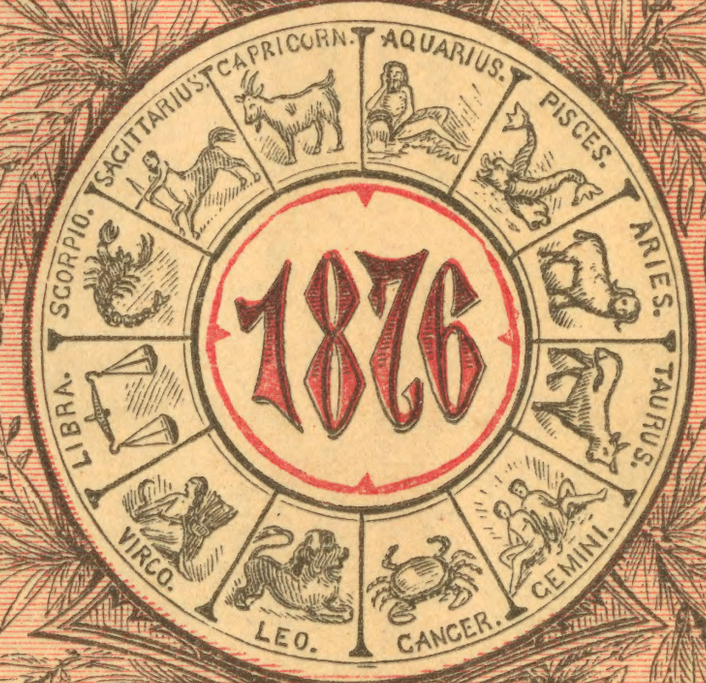
Blue Book.

Descriptions begun, September, 1882.

Blue Book

BB

# THE STANDARD DIARY




PUBLISHED

FOR

THE TRADE

# Calendar. 1876.

| | S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|---|
| Jan'y. | .. | .. | .. | .. | .. | .. | 1 |
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | 30 | 31 | .. | .. | .. | .. | .. |
| Febr'y. | .. | .. | 1 | 2 | 3 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| | 27 | 28 | 29 | .. | .. | .. | .. |
| March. | .. | .. | .. | 1 | 2 | 3 | 4 |
| | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| | 26 | 27 | 28 | 29 | 30 | 31 | .. |
| April. | .. | .. | .. | .. | .. | .. | 1 |
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | 30 | .. | .. | .. | .. | .. | .. |
| May. | .. | 1 | 2 | 3 | 4 | 5 | 6 |
| | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| | 28 | 29 | 30 | 31 | .. | .. | .. |
| June. | .. | .. | .. | .. | 1 | 2 | 3 |
| | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | 25 | 26 | 27 | 28 | 29 | 30 | .. |

| | S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|---|
| July. | .. | .. | .. | .. | .. | .. | 1 |
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | 30 | 31 | .. | .. | .. | .. | .. |
| August. | .. | .. | 1 | 2 | 3 | 4 | 5 |
| | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| | 27 | 28 | 29 | 30 | 31 | .. | .. |
| Sept'r. | .. | .. | .. | .. | .. | 1 | 2 |
| | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | .. | .. | .. | .. | .. | .. | .. |
| Oct'r. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| | 29 | 30 | 31 | .. | .. | .. | .. |
| Nov'r. | .. | .. | .. | 1 | 2 | 3 | 4 |
| | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| | 26 | 27 | 28 | 29 | 30 | .. | .. |
| Dec'r. | .. | .. | .. | .. | .. | 1 | 2 |
| | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| | 31 | .. | .. | .. | .. | .. | .. |

# RATES OF POSTAGE.

POSTAL CARDS, costing 1 cent each, on which short communications may be written, can be purchased at any post office and sent to any part of the United States or Dominion of Canada.

LETTERS TO ANY PART OF THE UNITED STATES or Dominion of Canada, 3 cents for each 1-2 ounce, or part thereof.

DROP LETTERS, 2 cents for each 1-2 ounce, at all letter-carrier offices; at other offices 1 cent.

VALUABLE LETTERS may be registered on application, at the office of mailing, and the payment of a registration fee of 8 cents on domestic letters. Fees on foreign letters variable.

TRANSIENT NEWSPAPERS, Periodicals, Pamphlets, Books, Book Manuscripts, Proof Sheets, Blanks, Circulars, Engravings, Articles of Merchandise, Seeds, Cuttings, Roots, Bulbs, and other mailable matter, 1 cent for each 2 ounces or part thereof. Newspaper, Magazine and Music Manuscripts are subject to letter postage.

NEWSPAPERS AND PERIODICALS, mailed from a known office of publication or news agency, and addressed to regular subscribers or news agents, issued weekly and oftener, two cents a pound and fraction thereof; less frequently, three cents a pound and fraction thereof. One copy of a newspaper to each actual subscriber residing within the County where the same is wholly or partly printed and published, FREE, except at letter-carrier offices.

ALL PACKAGES of mail matter not charged with letter postage must be so arranged that the same can be CONVENIENTLY examined by Postmasters; if not, letter postage will be charged.

NO PACKAGE will be forwarded by mail which weighs over 4 pounds.

ALL POSTAL MATTER, for delivery within the United States and Dominion of Canada, must be PREPAID by stamps.

LETTERS TO GREAT BRITAIN OR IRELAND, 6 cents for each 1-2 ounce. Prepayment optional, but subject to a fine of 6 cents in addition to postage, if wholly or partly unpaid.

LETTERS TO FRANCE, 9 cents for each 1-2 ounce. Prepayment optional.

LETTERS TO GERMANY, direct, 6 cents; by closed mail, via England, 7 cents for each 1-2 ounce. Prepayment optional. Double rates if unpaid.

POSTAL CARDS may be sent to Germany and Switzerland by adding a 1-cent postage stamp.

Letters to other foreign countries vary in rate according to the route by which they are sent; proper information can be obtained of postmasters.

# POSTAL MONEY ORDERS.

MONEY ORDER POST OFFICES are established in most of the large cities and towns, at which orders can be obtained upon any other office, at the following rates of commission: —

| | | | | |
|---|---|---|---|---|
| On orders not exceeding | | | $10 | 5 cents. |
| Over $10 | " | " | 20 | 10 " |
| " 20 | " | " | 30 | 15 " |
| " 30 | " | " | 40 | 20 " |
| " 40 | " | " | 50 | 25 " |

No single order issued for more than fifty dollars. Parties desiring to remit a larger sum must obtain additional money orders.

# FESTIVALS AND FASTS.

| | |
|---|---|
| Epiphany, | Jan. 6. |
| Septuagesima Sunday, | Feb. 13. |
| Quinquagesima (Shrove Sunday), | Feb. 27. |
| Ash Wednesday, | Mar. 1. |
| First Sunday in Lent, | Mar. 5. |
| Saint Patrick, | Mar. 17. |
| Palm Sunday, | April 9. |
| Good Friday, | April 14. |
| Easter Sunday, | April 16. |
| Low Sunday, | April 23. |
| Rogation Sunday, | May 21. |
| Ascension Day (Holy Thursday), | May 25. |
| Pentecost (Whit Sunday), | June 4. |
| Trinity Sunday, | June 11. |
| Corpus Christi, | June 15. |
| First Sunday in Advent, | Dec. 3. |
| Christmas Day, | Dec. 25. |

# CHRONOLOGICAL CYCLES.

| | |
|---|---|
| Dominical Letters, | B. A. |
| Epact, | 4. |
| Golden Number, | 15. |
| Solar Cycle, | 9. |
| Roman Indiction, | 4. |
| Julian Period, | 6589. |

# ECLIPSES IN 1876.

In the year 1876 there will be four eclipses; two of the Sun, and two of the Moon.

I. A partial eclipse of the Moon, night of March 9–10. Visible to the world generally, except to Asia and Australia. Occurring as follows:

| | NEW YORK. | BOSTON. |
|---|---|---|
| Moon Enters Penumbra, | 9d. 11h. 1m. A. | 9d. 11h. 13m. A. |
| Moon Enters Shadow, | 10d. 0h. 25m. M. | 10d. 0h. 37m. M. |
| Middle of Eclipse, | 10d. 1h. 25m. M. | 10d. 1h. 37m. M. |
| Moon Leaves Shadow, | 10d. 2h. 25m. M. | 10d. 2h. 37m. M. |
| Moon Leaves Penumbra, | 10d. 3h. 49m. M. | 10d. 4h. 1m. M. |

Magnitude of Eclipse = 0.298. (Moon's diameter = 1.)

II. An Annular Eclipse of the Sun, March 25th. Visible to North America and Northern Pacific Ocean. To Vancouver Island, it will be nearly central and annular. To the following places, it will be visible, at the times given, as a partial eclipse only:

| | Eclipse begins. | Eclipse ends. |
|---|---|---|
| Boston, | 25d. 4h. 14m. A. | 25d. 5h. 52m. A. |
| New York, | 25d. 4h. 0m. A. | 25d. 5h. 38m. A. |
| Chicago, | 25d. 2h. 45m. A. | 25d. 4h. 38m. A. |
| Philadelphia, | 25d. 3h. 57m. A. | 25d. 5h. 31m. A. |

III. A partial eclipse of the Moon, Sept. 3; invisible. Visible to the world generally, except to North America and Pacific Ocean.

IV. A total eclipse of the Sun, Sept. 18th; invisible. Visible to Australia and Southern Pacific Ocean.

# THE SEASONS.

| | | | |
|---|---|---|---|
| Spring begins . . . . . | March 20d. | 1h. | 2m. a.m. |
| Summer begins . . . . . | June 20d. | 9h. | 23m. p.m. |
| Autumn begins . . . . . | Sept. 22d. | 11h. | 33m. a.m. |
| Winter begins . . . . . | Dec. 21d. | 5h. | 46m. a.m. |

Given in Washington time.

## MORNING AND EVENING STARS.

MERCURY will be *evening star* about January 28, May 21, and Sept. 17; and *morning star* about March 10, July 8, and October 28. — VENUS will be *evening star* till July 14, and *morning star* the rest of the year.—JUPITER will be *morning star* till May 17, then *evening star* till December 4, and *morning star* again the rest of the year.

# JANUARY.

First Quarter, 4th day, 10h. 40m. A.M.
Full Moon, 11th day, 1h. 39m. A.M.
Last Quarter, 18th day, 4h. 5m. A.M.
New Moon, 26th day, 8h. 58m. A.M.

| 1876. | | BOSTON. | | | NEW YORK. | | |
|---|---|---|---|---|---|---|---|
| | | Sun R. & S. | Moon R. & S. | High Water. | Sun R. & S. | Moon R. & S. | High Water. |
| 1 | Satur. | r 7 30 | 9 32 | 2 26 | r 7 25 | 9 34 | 11 29 |
| 2 | ☩ | s 4 39 | 10 39 | 3 5 | s 4 44 | 10 40 | ..... |
| 3 | Mon. | r 7 30 | 11 47 | 3 47 | r 7 25 | 11 46 | 0 33 |
| 4 | Tues. | s 4 41 | morn | 4 32 | s 4 46 | morn | 1 19 |
| 5 | Wed. | r 7 30 | 0 58 | 5 24 | r 7 25 | 0 56 | 2 10 |
| 6 | Thur. | s 4 43 | 2 13 | 6 20 | s 4 48 | 2 9 | 3 6 |
| 7 | Frid. | r 7 30 | 3 33 | 7 26 | r 7 25 | 3 28 | 4 11 |
| 8 | Satur. | s 4 45 | 4 54 | 8 35 | s 4 50 | 4 48 | 5 20 |
| 9 | ☩ | r 7 29 | 6 11 | 9 43 | r 7 24 | 6 4 | 6 29 |
| 10 | Mon. | s 4 47 | 7 19 | 10 48 | s 4 52 | 7 12 | 7 32 |
| 11 | Tues. | r 7 29 | rises | 11 44 | r 7 24 | rises | 8 27 |
| 12 | Wed. | s 4 49 | 6 35 | 0 11 | s 4 54 | 6 39 | 9 25 |
| 13 | Thur. | r 7 28 | 7 53 | 1 3 | r 7 23 | 7 56 | 10 12 |
| 14 | Frid. | s 4 51 | 9 7 | 1 50 | s 4 56 | 9 9 | 10 54 |
| 15 | Satur. | r 7 27 | 10 17 | 2 34 | r 7 23 | 10 17 | 11 38 |
| 16 | ☩ | s 4 54 | 11 24 | 3 15 | s 4 58 | 11 23 | 0 0 |
| 17 | Mon. | r 7 26 | morn | 3 57 | r 7 22 | morn | 0 44 |
| 18 | Tues. | s 4 56 | 0 30 | 4 42 | s 5 1 | 0 27 | 1 29 |
| 19 | Wed. | r 7 25 | 1 35 | 5 32 | r 7 21 | 1 31 | 2 18 |
| 20 | Thur. | s 4 59 | 2 40 | 6 27 | s 5 3 | 2 35 | 3 12 |
| 21 | Frid. | r 7 24 | 3 44 | 7 23 | r 7 20 | 3 38 | 4 8 |
| 22 | Satur. | s 5 1 | 4 45 | 8 20 | s 5 5 | 4 38 | 5 4 |
| 23 | ☩ | r 7 23 | 5 41 | 9 16 | r 7 18 | 5 34 | 6 1 |
| 24 | Mon. | s 5 3 | 6 30 | 10 8 | s 5 8 | 6 23 | 6 54 |
| 25 | Tues. | r 7 21 | sets | 10 56 | r 7 17 | sets | 7 40 |
| 26 | Wed. | s 5 6 | 5 10 | 11 39 | s 5 10 | 5 15 | 8 21 |
| 27 | Thur. | r 7 20 | 6 18 | ..... | r 7 15 | 6 22 | 9 5 |
| 28 | Frid. | s 5 8 | 7 25 | 0 39 | s 5 12 | 7 27 | 9 45 |
| 29 | Satur. | r 7 18 | 8 32 | 1 17 | r 7 14 | 8 33 | 10 20 |
| 30 | ☩ | s 5 11 | 9 40 | 1 55 | s 5 15 | 9 40 | 10 56 |
| 31 | Mon. | r 7 16 | 10 49 | 2 34 | r 7 12 | 10 47 | 11 37 |

# FEBRUARY.

First Quarter, 2d day, 9h. 9m. P.M.
Full Moon, 9th day, 1h. 3m. P.M.
Last Quarter, 17th day, 0h. 12m. A.M.
New Moon, 25th day, 1h. 36m. A.M.

| 1876. | | BOSTON. | | | NEW YORK. | | |
|---|---|---|---|---|---|---|---|
| | | Sun R. & S. | Moon R. & S. | High Water. | Sun R. & S. | Moon R. & S. | High Water. |
| 1 | Tues. | r 7 15 | morn | 3 14 | r 7 11 | 11 58 | ..... |
| 2 | Wed. | s 5 15 | 0 1 | 3 59 | s 5 18 | morn | 0 46 |
| 3 | Thur. | r 7 13 | 1 17 | 4 53 | r 7 9 | 1 12 | 1 40 |
| 4 | Frid. | s 5 18 | 2 35 | 5 59 | s 5 21 | 2 29 | 2 45 |
| 5 | Satur. | r 7 10 | 3 51 | 7 12 | r 7 7 | 3 44 | 3 57 |
| 6 | ☩ | s 5 20 | 5 1 | 8 26 | s 5 23 | 4 53 | 5 10 |
| 7 | Mon. | r 7 8 | 6 0 | 9 37 | r 7 5 | 5 53 | 6 23 |
| 8 | Tues. | s 5 23 | 6 46 | 10 38 | s 5 26 | 6 40 | 7 23 |
| 9 | Wed. | r 7 6 | rises | 11 30 | r 7 2 | rises | 8 12 |
| 10 | Thur. | s 5 25 | 6 42 | ..... | s 5 28 | 6 44 | 9 1 |
| 11 | Frid. | r 7 3 | 7 54 | 0 37 | r 7 0 | 7 55 | 9 44 |
| 12 | Satur. | s 5 28 | 9 4 | 1 18 | s 5 31 | 9 3 | 10 22 |
| 13 | ☩ | r 7 0 | 10 12 | 1 57 | r 6 58 | 10 10 | 10 59 |
| 14 | Mon. | s 5 31 | 11 19 | 2 36 | s 5 33 | 11 12 | 11 40 |
| 15 | Tues. | r 6 58 | morn | 3 16 | r 6 55 | morn | 0 2 |
| 16 | Wed. | s 5 33 | 0 26 | 4 0 | s 5 36 | 0 21 | 0 47 |
| 17 | Thur. | r 6 55 | 1 32 | 4 50 | r 6 53 | 1 26 | 1 37 |
| 18 | Frid. | s 5 36 | 2 35 | 5 48 | s 5 38 | 2 28 | 2 33 |
| 19 | Satur. | r 6 52 | 3 34 | 6 49 | r 6 50 | 3 27 | 3 35 |
| 20 | ☩ | s 5 38 | 4 26 | 7 50 | s 5 40 | 4 19 | 4 35 |
| 21 | Mon. | r 6 49 | 5 10 | 8 49 | r 6 47 | 5 3 | 5 33 |
| 22 | Tues. | s 5 41 | 5 46 | 9 42 | s 5 43 | 5 40 | 6 28 |
| 23 | Wed. | r 6 46 | 6 16 | 10 30 | r 6 44 | 6 11 | 7 15 |
| 24 | Thur. | s 5 43 | sets | 11 13 | s 5 45 | sets | 7 56 |
| 25 | Frid. | r 6 43 | 6 20 | 11 51 | r 6 41 | 6 22 | 8 34 |
| 26 | Satur. | s 5 46 | 7 29 | 0 9 | s 5 48 | 7 29 | 9 13 |
| 27 | ☩ | r 6 40 | 8 39 | 0 46 | r 6 38 | 8 38 | 9 52 |
| 28 | Mon. | s 5 48 | 9 52 | 1 25 | s 5 50 | 9 49 | 10 29 |
| 29 | Tues. | r 6 37 | 11 8 | 2 5 | r 6 35 | 11 4 | 11 9 |
| .. | ..... | ..... | .... | ..... | ..... | ..... | ..... |
| .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

# MARCH.

First Quarter, 3rd day, 5h. 4m. A.M.
Full Moon, 10th day, 1h. 28m. A.M.
Last Quarter, 17th day, 8h. 40m. P.M.
New Moon, 25th day, 3h. 28m. P.M.

| 1876. | | BOSTON. | | | NEW YORK. | | |
|---|---|---|---|---|---|---|---|
| | | Sun R. & S. | Moon R. & S. | High Water. | Sun R. & S. | Moon R. & S. | High Water. |
| 1 | Wed. | r 6 35 | morn | 2 50 | r 6 34 | morn | 11 59 |
| 2 | Thur. | s 5 52 | 0 25 | 3 40 | s 5 53 | 0 19 | 0 26 |
| 3 | Frid. | r 6 32 | 1 41 | 4 40 | r 6 31 | 1 34 | 1 27 |
| 4 | Satur. | s 5 54 | 2 51 | 5 53 | s 5 55 | 2 43 | 2 39 |
| 5 | ☩ | r 6 28 | 3 52 | 7 9 | r 6 28 | 3 45 | 3 54 |
| 6 | Mon. | s 5 57 | 4 41 | 8 23 | s 5 57 | 4 35 | 5 7 |
| 7 | Tues. | r 6 25 | 5 18 | 9 26 | r 6 24 | 5 13 | 6 12 |
| 8 | Wed. | s 5 59 | 5 47 | 10 21 | s 6 0 | 5 43 | 7 7 |
| 9 | Thur. | r 6 22 | rises | 11 7 | r 6 21 | rises | 7 50 |
| 10 | Frid. | s 6 1 | 6 44 | 11 46 | s 6 2 | 6 44 | 8 29 |
| 11 | Satur. | r 6 18 | 7 52 | 0 5 | r 6 18 | 7 51 | 9 10 |
| 12 | ☩ | s 6 4 | 9 0 | 0 43 | s 6 4 | 8 47 | 9 48 |
| 13 | Mon. | r 6 15 | 10 9 | 1 21 | r 6 15 | 10 5 | 10 25 |
| 14 | Tues. | s 6 6 | 11 17 | 2 0 | s 6 6 | 11 12 | 11 3 |
| 15 | Wed. | r 6 12 | morn | 2 42 | r 6 11 | morn | 11 48 |
| 16 | Thur. | s 6 8 | 0 22 | 3 27 | s 6 8 | 0 16 | 0 12 |
| 17 | Frid. | r 6 8 | 1 22 | 4 17 | r 6 8 | 1 15 | 1 4 |
| 18 | Satur. | s 6 10 | 2 17 | 5 15 | s 6 11 | 2 9 | 2 2 |
| 19 | ☩ | r 6 5 | 3 5 | 6 18 | r 6 5 | 2 58 | 3 4 |
| 20 | Mon. | s 6 13 | 3 45 | 7 19 | s 6 13 | 3 39 | 4 4 |
| 21 | Tues. | r 6 1 | 4 17 | 8 18 | r 6 1 | 4 12 | 5 3 |
| 22 | Wed. | s 6 15 | 4 43 | 9 10 | s 6 15 | 4 39 | 5 55 |
| 23 | Thur. | r 5 58 | 5 6 | 9 56 | r 5 58 | 5 3 | 6 42 |
| 24 | Frid. | s 6 17 | 5 26 | 10 39 | s 6 17 | 5 25 | 7 24 |
| 25 | Satur. | r 5 54 | sets | 11 18 | r 5 55 | sets | 8 0 |
| 26 | ☩ | s 6 19 | 7 36 | 11 57 | s 6 19 | 7 34 | 8 41 |
| 27 | Mon. | r 5 51 | 8 53 | 0 17 | r 5 51 | 8 49 | 9 24 |
| 28 | Tues. | s 6 22 | 10 11 | 0 59 | s 6 21 | 10 6 | 10 6 |
| 29 | Wed. | r 5 47 | 11 30 | 1 44 | r 5 48 | 11 24 | 10 52 |
| 30 | Thur. | s 6 24 | morn | 2 36 | s 6 23 | morn | 11 47 |
| 31 | Frid. | r 5 44 | 0 44 | 3 33 | r 5 45 | 0 37 | 0 19 |

# APRIL.

First Quarter, 1st day, 11h. 28m. A. M.
Full Moon, 8th day, 2h. 55m. P. M.
Last Quarter, 16th day, 3h. 53m. P. M.
New Moon, 24th day, 2h. 19m. A. M.
First Quarter, 30th day, 5h. 43m. P. M.

| 1876. | | BOSTON. | | | NEW YORK. | | |
|---|---|---|---|---|---|---|---|
| | | Sun R. & S. | Moon R. & S. | High Water. | Sun R. & S. | Moon R. & S. | High Water. |
| 1 | Satur. | r 5 42 | 1 48 | 4 39 | r 5 43 | 1 41 | 1 26 |
| 2 | ☩ | s 6 27 | 2 40 | 5 53 | s 6 26 | 2 34 | 2 39 |
| 3 | Mon. | r 5 39 | 3 20 | 7 4 | r 5 40 | 3 15 | 3 49 |
| 4 | Tues. | s 6 30 | 3 51 | 8 9 | s 6 28 | 3 47 | 4 53 |
| 5 | Wed. | r 5 35 | 4 15 | 9 4 | r 5 36 | 4 12 | 5 49 |
| 6 | Thur. | s 6 32 | 4 37 | 9 53 | s 6 30 | 4 36 | 6 39 |
| 7 | Frid. | r 5 32 | 4 57 | 10 36 | r 5 33 | 4 57 | 7 21 |
| 8 | Satur. | s 6 34 | rises | 11 15 | s 6 32 | rises | 7 57 |
| 9 | ☩ | r 5 28 | 7 50 | 11 52 | r 5 30 | 7 46 | 8 35 |
| 10 | Mon. | s 6 36 | 8 59 | 0 10 | s 6 34 | 8 54 | 9 16 |
| 11 | Tues. | r 5 25 | 10 6 | 0 49 | r 5 27 | 10 0 | 9 55 |
| 12 | Wed. | s 6 38 | 11 9 | 1 30 | s 6 37 | 11 2 | 10 36 |
| 13 | Thur. | r 5 22 | morn | 2 15 | r 5 24 | 11 59 | 11 20 |
| 14 | Frid. | s 6 41 | 0 7 | 3 1 | s 6 39 | morn | ..... |
| 15 | Satur. | r 5 19 | 0 58 | 3 50 | r 5 21 | 0 51 | 0 37 |
| 16 | ☩ | s 6 43 | 1 41 | 4 45 | s 6 41 | 1 34 | 1 32 |
| 17 | Mon. | r 5 15 | 2 16 | 5 43 | r 5 18 | 2 10 | 2 29 |
| 18 | Tues. | s 6 45 | 2 43 | 6 41 | s 6 43 | 2 38 | 3 26 |
| 19 | Wed. | r 5 12 | 3 7 | 7 36 | r 5 15 | 3 4 | 4 20 |
| 20 | Thur. | s 6 47 | 3 29 | 8 27 | s 6 45 | 3 27 | 5 12 |
| 21 | Frid. | r 5 9 | 3 50 | 9 16 | r 5 12 | 3 49 | 6 2 |
| 22 | Satur. | s 6 50 | 4 10 | 10 1 | s 6 47 | 4 11 | 6 47 |
| 23 | ☩ | r 5 6 | 4 31 | 10 46 | r 5 9 | 4 33 | 7 30 |
| 24 | Mon. | s 6 52 | sets | 11 30 | s 6 49 | sets | 8 12 |
| 25 | Tues. | r 5 3 | 9 11 | ..... | r 5 6 | 9 5 | 9 0 |
| 26 | Wed. | s 6 54 | 10 29 | 0 39 | s 6 51 | 10 22 | 9 52 |
| 27 | Thur. | r 5 0 | 11 39 | 1 33 | r 5 3 | 11 31 | 10 45 |
| 28 | Frid. | s 6 56 | morn | 2 31 | s 6 53 | morn | 11 44 |
| 29 | Satur. | r 4 58 | 0 37 | 3 31 | r 5 1 | 0 30 | 0 17 |
| 30 | ☩ | s 6 59 | 1 21 | 4 35 | s 6 55 | 1 15 | 1 22 |
| .. | ..... | ..... | ..... | ..... | ..... | .... | ..... |

# MAY.

Full Moon, 8th day, 5h. 9m. A.M.
Last Quarter, 16th day, 8h. 43m. A.M.
New Moon, 23rd day, 10h. 41m. A.M.
First Quarter, 30th day, 1h. 5m. A.M.

| 1876. | | BOSTON. | | | NEW YORK. | | |
|---|---|---|---|---|---|---|---|
| | | Sun R. & S. | Moon R. & S. | High Water. | Sun R. & S. | Moon R. & S. | High Water. |
| 1 | Mon. | r 4 55 | 1 55 | 5 41 | r 4 58 | 1 50 | 2 27 |
| 2 | Tues. | s 7 1 | 2 21 | 6 43 | s 6 57 | 2 18 | 3 29 |
| 3 | Wed. | r 4 52 | 2 43 | 7 40 | r 4 56 | 2 41 | 4 25 |
| 4 | Thur. | s 7 3 | 3 3 | 8 32 | s 6 59 | 3 3 | 5 16 |
| 5 | Frid. | r 4 49 | 3 23 | 9 18 | r 4 53 | 3 24 | 6 4 |
| 6 | Satur. | s 7 5 | 3 42 | 10 2 | s 7 2 | 3 44 | 6 48 |
| 7 | ☩ | r 4 47 | 4 4 | 10 44 | r 4 51 | 4 8 | 7 29 |
| 8 | Mon. | s 7 7 | rises | 11 24 | s 7 4 | rises | 8 6 |
| 9 | Tues. | r 4 45 | 8 58 | ..... | r 4 49 | 8 52 | 8 48 |
| 10 | Wed. | s 7 9 | 9 58 | 0 23 | s 7 6 | 9 51 | 9 31 |
| 11 | Thur. | r 4 42 | 10 52 | 1 7 | r 4 46 | 10 45 | 10 15 |
| 12 | Frid. | s 7 12 | 11 38 | 1 53 | s 7 8 | 11 31 | 10 58 |
| 13 | Satur. | r 4 40 | morn | 2 39 | r 4 44 | morn | 11 46 |
| 14 | ☩ | s 7 14 | 0 15 | 3 25 | s 7 9 | 0 9 | 0 10 |
| 15 | Mon. | r 4 38 | 0 44 | 4 14 | r 4 42 | 0 39 | 1 0 |
| 16 | Tues. | s 7 16 | 1 9 | 5 5 | s 7 11 | 1 5 | 1 51 |
| 17 | Wed. | r 4 36 | 1 31 | 5 57 | r 4 41 | 1 28 | 2 41 |
| 18 | Thur. | s 7 18 | 1 51 | 6 49 | s 7 13 | 1 50 | 3 35 |
| 19 | Frid. | r 4 34 | 2 10 | 7 41 | r 4 39 | 2 10 | 4 25 |
| 20 | Satur. | s 7 20 | 2 31 | 8 33 | s 7 15 | 2 33 | 5 17 |
| 21 | ☩ | r 4 32 | 2 55 | 9 24 | r 4 37 | 2 58 | 6 9 |
| 22 | Mon. | s 7 22 | 3 24 | 10 16 | s 7 17 | 3 28 | 7 2 |
| 23 | Tues. | r 4 31 | sets | 11 9 | r 4 36 | sets | 7 53 |
| 24 | Wed. | s 7 24 | 9 21 | ..... | s 7 18 | 9 14 | 8 47 |
| 25 | Thur. | r 4 29 | 10 26 | 0 30 | r 4 34 | 10 19 | 9 46 |
| 26 | Frid. | s 7 25 | 11 16 | 1 29 | s 7 20 | 11 10 | 10 41 |
| 27 | Satur. | r 4 28 | 11 54 | 2 27 | r 4 33 | 11 49 | 11 38 |
| 28 | ☩ | s 7 27 | morn | 3 23 | s 7 22 | morn | 0 8 |
| 29 | Mon. | r 4 27 | 0 24 | 4 18 | r 4 32 | 0 21 | 1 5 |
| 30 | Tues. | s 7 29 | 0 48 | 5 13 | s 7 23 | 0 46 | 1 59 |
| 31 | Wed. | r 4 26 | 1 9 | 6 8 | r 4 31 | 1 8 | 2 54 |

# JUNE.

Full Moon, 6th day, 7h. 53m. P.M.
Last Quarter, 14th day, 10h. 30m. P.M.
New Moon, 21st day, 5h. 33m. P.M.
First Quarter, 28th day, 10h. 30m. A.M.

| 1876. | | BOSTON. | | | NEW YORK. | | |
|---|---|---|---|---|---|---|---|
| | | Sun R. & S. | Moon R. & S. | High Water. | Sun R. & S. | Moon R. & S. | High Water. |
| 1 | Thur. | r 4 25 | 1 29 | 7 1 | r 4 31 | 1 30 | 3 46 |
| 2 | Frid. | s 7 31 | 1 48 | 7 52 | s 7 26 | 1 50 | 4 37 |
| 3 | Satur. | r 4 25 | 2 9 | 8 41 | r 4 30 | 2 12 | 5 26 |
| 4 | ☩ | s 7 32 | 2 33 | 9 28 | s 7 27 | 2 37 | 6 14 |
| 5 | Mon. | r 4 24 | 3 1 | 10 14 | r 4 29 | 3 7 | 7 0 |
| 6 | Tues. | s 7 34 | rises | 11 0 | s 7 28 | rises | 7 43 |
| 7 | Wed. | r 4 23 | 8 47 | 11 43 | r 4 29 | 8 40 | 8 25 |
| 8 | Thur. | s 7 35 | 9 34 | 0 4 | s 7 29 | 9 27 | 9 12 |
| 9 | Frid. | r 4 23 | 10 13 | 0 47 | r 4 28 | 10 7 | 9 56 |
| 10 | Satur. | s 7 36 | 10 45 | 1 32 | s 7 30 | 10 40 | 10 37 |
| 11 | ☩ | r 4 22 | 11 12 | 2 16 | r 4 28 | 11 8 | 11 19 |
| 12 | Mon. | s 7 37 | 11 35 | 2 57 | s 7 31 | 11 32 | ..... |
| 13 | Tues. | r 4 22 | 11 55 | 3 40 | r 4 28 | 11 53 | 0 25 |
| 14 | Wed. | s 7 38 | morn | 4 22 | s 7 32 | morn | 1 9 |
| 15 | Thur. | r 4 22 | 0 14 | 5 10 | r 4 28 | 0 14 | 1 56 |
| 16 | Frid. | s 7 38 | 0 32 | 6 1 | s 7 33 | 0 33 | 2 47 |
| 17 | Satur. | r 4 22 | 0 53 | 6 55 | r 4 28 | 0 55 | 3 41 |
| 18 | ☩ | s 7 39 | 1 19 | 7 54 | s 7 34 | 1 23 | 4 38 |
| 19 | Mon. | r 4 23 | 1 51 | 8 54 | r 4 28 | 1 56 | 5 39 |
| 20 | Tues. | s 7 40 | 2 33 | 9 57 | s 7 34 | 2 39 | 6 43 |
| 21 | Wed. | r 4 23 | sets | 10 58 | r 4 29 | sets | 7 42 |
| 22 | Thur. | s 7 40 | 9 4 | 11 56 | s 7 35 | 8 57 | 8 40 |
| 23 | Frid. | r 4 24 | 9 49 | 0 24 | r 4 29 | 9 44 | 9 39 |
| 24 | Satur. | s 7 40 | 10 23 | 1 20 | s 7 35 | 10 19 | 10 30 |
| 25 | ☩ | r 4 24 | 10 50 | 2 12 | r 4 30 | 10 47 | 11 19 |
| 26 | Mon. | s 7 40 | 11 13 | 3 1 | s 7 35 | 11 12 | ..... |
| 27 | Tues. | r 4 25 | 11 33 | 3 47 | r 4 31 | 11 33 | 0 33 |
| 28 | Wed. | s 7 40 | 11 53 | 4 35 | s 7 35 | 11 55 | 1 22 |
| 29 | Thur. | r 4 26 | morn | 5 25 | r 4 31 | morn | 2 11 |
| 30 | Frid. | s 7 40 | 0 13 | 6 18 | s 7 35 | 0 16 | 3 4 |
| .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

# JULY.

Full Moon, 6th day, 10h. 54m. A.M.
Last Quarter, 14th day, 9h. 12m. A.M.
New Moon, 21st day, 0h. 9m. A.M.
First Quarter, 27th day, 10h. 35m. P.M.

| 1876. | | BOSTON. | | | NEW YORK. | | |
|---|---|---|---|---|---|---|---|
| | | Sun R. & S. | Moon R. & S. | High Water. | Sun R. & S. | Moon R. & S. | High Water. |
| 1 | Satur. | r 4 27 | 0 35 | 7 12 | r 4 32 | 0 39 | 3 57 |
| 2 | ☩ | s 7 40 | 1 2 | 8 6 | s 7 34 | 1 7 | 4 50 |
| 3 | Mon. | r 4 28 | 1 35 | 8 59 | r 4 33 | 1 41 | 5 44 |
| 4 | Tues. | s 7 40 | 2 15 | 9 51 | s 7 34 | 2 22 | 6 37 |
| 5 | Wed. | r 4 29 | 3 2 | 10 40 | r 4 35 | 3 9 | 7 25 |
| 6 | Thur. | s 7 39 | rises | 11 26 | s 7 33 | rises | 8 8 |
| 7 | Frid. | r 4 30 | 8 48 | ..... | r 4 36 | 8 42 | 8 52 |
| 8 | Satur. | s 7 38 | 9 16 | 0 28 | s 7 33 | 9 11 | 9 34 |
| 9 | ☩ | r 4 32 | 9 39 | 1 8 | r 4 38 | 9 36 | 10 13 |
| 10 | Mon. | s 7 37 | 9 59 | 1 48 | s 7 32 | 9 57 | 10 50 |
| 11 | Tues. | r 4 33 | 10 18 | 2 25 | r 4 39 | 10 17 | 11 26 |
| 12 | Wed. | s 7 36 | 10 37 | 3 3 | s 7 31 | 10 38 | ..... |
| 13 | Thur. | r 4 35 | 10 56 | 3 43 | r 4 40 | 10 58 | 0 29 |
| 14 | Frid. | s 7 35 | 11 19 | 4 27 | s 7 30 | 11 22 | 1 14 |
| 15 | Satur. | r 4 36 | 11 47 | 5 19 | r 4 41 | 11 52 | 2 6 |
| 16 | ☩ | s 7 34 | morn | 6 20 | s 7 29 | morn | 3 5 |
| 17 | Mon. | r 4 38 | 0 23 | 7 26 | r 4 43 | 0 29 | 4 11 |
| 18 | Tues. | s 7 32 | 1 9 | 8 38 | s 7 28 | 1 16 | 5 23 |
| 19 | Wed. | r 4 40 | 2 10 | 9 47 | r 4 45 | 2 17 | 6 33 |
| 20 | Thur. | s 7 31 | sets | 10 51 | s 7 26 | sets | 7 35 |
| 21 | Frid. | r 4 42 | 8 19 | 11 48 | r 4 46 | 8 14 | 8 31 |
| 22 | Satur. | s 7 29 | 8 48 | 0 13 | s 7 25 | 8 45 | 9 24 |
| 23 | ☩ | r 4 44 | 9 13 | 1 2 | r 4 48 | 9 11 | 10 10 |
| 24 | Mon. | s 7 28 | 9 36 | 1 47 | s 7 23 | 9 36 | 10 51 |
| 25 | Tues. | r 4 45 | 9 56 | 2 30 | r 4 50 | 9 57 | 11 34 |
| 26 | Wed. | s 7 26 | 10 16 | 3 12 | s 7 21 | 10 18 | ..... |
| 27 | Thur. | r 4 47 | 10 39 | 3 55 | r 4 52 | 10 43 | 0 42 |
| 28 | Frid. | s 7 23 | 11 5 | 4 43 | s 7 19 | 11 10 | 1 30 |
| 29 | Satur. | r 4 49 | 11 35 | 5 37 | r 4 54 | 11 41 | 2 23 |
| 30 | ☩ | s 7 21 | morn | 6 35 | s 7 17 | morn | 3 21 |
| 31 | Mon. | r 4 51 | 0 12 | 7 36 | r 4 56 | 0 19 | 4 21 |

# AUGUST.

Full Moon, 5th day, 1h. 54m. A.M.
Last Quarter, 12th day, 5h. 15m. P.M.
New Moon, 19th day, 7h. 42m. A.M.
First Quarter, 26th day, 1h. 34m. P.M.

| 1876. | | BOSTON. | | | NEW YORK. | | |
|---|---|---|---|---|---|---|---|
| | | Sun R. & S. | Moon R. & S. | High Water. | Sun R. & S. | Moon R. & S. | High Water. |
| 1 | Tues. | r 4 52 | 0 57 | 8 35 | r 4 57 | 1 4 | 5 20 |
| 2 | Wed. | s 7 18 | 1 51 | 9 28 | s 7 14 | 1 58 | 6 14 |
| 3 | Thur. | r 4 54 | 2 52 | 10 19 | r 4 58 | 2 58 | 7 5 |
| 4 | Frid. | s 7 15 | rises | 11 4 | s 7 12 | rises | 7 47 |
| 5 | Satur. | r 4 57 | 7 45 | 11 44 | r 5 0 | 7 41 | 8 26 |
| 6 | ☩ | s 7 13 | 8 6 | 0 3 | s 7 9 | 8 4 | 9 7 |
| 7 | Mon. | r 4 59 | 8 25 | 0 40 | r 5 2 | 8 24 | 9 44 |
| 8 | Tues. | s 7 10 | 8 43 | 1 16 | s 7 7 | 8 43 | 10 19 |
| 9 | Wed. | r 5 1 | 9 2 | 1 52 | r 5 4 | 9 3 | 10 54 |
| 10 | Thur. | s 7 8 | 9 24 | 2 30 | s 7 4 | 9 27 | 11 32 |
| 11 | Frid. | r 5 3 | 9 49 | 3 10 | r 5 6 | 9 53 | ..... |
| 12 | Satur. | s 7 5 | 10 20 | 3 55 | s 7 1 | 10 25 | 0 43 |
| 13 | ☩ | r 5 5 | 11 0 | 4 52 | r 5 8 | 11 7 | 1 39 |
| 14 | Mon. | s 7 2 | 11 52 | 6 0 | s 6 59 | 11 59 | 2 46 |
| 15 | Tues. | r 5 7 | morn | 7 16 | r 5 10 | morn | 4 1 |
| 16 | Wed. | s 6 59 | 0 59 | 8 32 | s 6 56 | 1 6 | 5 17 |
| 17 | Thur. | r 5 9 | 2 18 | 9 40 | r 5 12 | 2 24 | 6 26 |
| 18 | Frid. | s 6 56 | 3 42 | 10 39 | s 6 53 | 3 47 | 7 24 |
| 19 | Satur. | r 5 11 | sets | 11 30 | r 5 14 | sets | 8 13 |
| 20 | ☩ | s 6 53 | 7 36 | ..... | s 6 50 | 7 35 | 8 59 |
| 21 | Mon. | r 5 14 | 7 57 | 0 35 | r 5 16 | 7 57 | 9 42 |
| 22 | Tues. | s 6 50 | 8 19 | 1 16 | s 6 47 | 8 21 | 10 21 |
| 23 | Wed. | r 5 16 | 8 41 | 1 56 | r 5 18 | 8 44 | 10 59 |
| 24 | Thur. | s 6 47 | 9 5 | 2 38 | s 6 44 | 9 10 | 11 42 |
| 25 | Frid. | r 5 18 | 9 34 | 3 20 | r 5 20 | 9 40 | 0 5 |
| 26 | Satur. | s 6 43 | 10 9 | 4 7 | s 6 41 | 10 16 | 0 54 |
| 27 | ☩ | r 5 20 | 10 52 | 5 2 | r 5 22 | 10 59 | 1 48 |
| 28 | Mon. | s 6 40 | 11 43 | 6 3 | s 6 38 | 11 52 | 2 49 |
| 29 | Tues. | r 5 22 | morn | 7 7 | r 5 24 | morn | 3 52 |
| 30 | Wed. | s 6 37 | 0 41 | 8 7 | s 6 35 | 0 48 | 4 51 |
| 31 | Thur. | r 5 24 | 1 44 | 9 2 | r 5 26 | 1 50 | 5 47 |

# SEPTEMBER.

Full Moon, 3rd day, 4h. 29m. P.M.
Last Quarter, 10th day, 11h. 37m. P.M.
New Moon, 17th day, 5h. 10m. P.M.
First Quarter, 25th day, 7h. 19m. A.M.

| 1876. | | BOSTON. | | | NEW YORK. | | |
|---|---|---|---|---|---|---|---|
| | | Sun R. & S. | Moon R. & S. | High Water. | Sun R. & S. | Moon R. & S. | High Water. |
| 1 | Frid. | r 5 25 | 2 49 | 9 52 | r 5 27 | 2 54 | 6 38 |
| 2 | Satur. | s 6 32 | 3 56 | 10 35 | s 6 30 | 4 0 | 7 20 |
| 3 | ☩ | r 5 27 | rises | 11 15 | r 5 29 | rises | 7 57 |
| 4 | Mon. | s 6 28 | 6 50 | 11 50 | s 6 27 | 6 50 | 8 33 |
| 5 | Tues. | r 5 29 | 7 9 | 0 7 | r 5 31 | 7 10 | 9 11 |
| 6 | Wed. | s 6 25 | 7 29 | 0 43 | s 6 24 | 7 31 | 9 48 |
| 7 | Thur. | r 5 32 | 7 52 | 1 21 | r 5 33 | 7 56 | 10 26 |
| 8 | Frid. | s 6 22 | 8 21 | 2 2 | s 6 20 | 8 26 | 11 7 |
| 9 | Satur. | r 5 34 | 8 58 | 2 48 | r 5 35 | 9 4 | 11 57 |
| 10 | ☩ | s 6 18 | 9 46 | 3 39 | s 6 17 | 9 53 | 0 26 |
| 11 | Mon. | r 5 36 | 10 46 | 4 42 | r 5 37 | 10 54 | 1 29 |
| 12 | Tues. | s 6 14 | 11 58 | 5 55 | s 6 14 | morn | 2 41 |
| 13 | Wed. | r 5 38 | morn | 7 12 | r 5 39 | 0 5 | 3 57 |
| 14 | Thur. | s 6 11 | 1 17 | 8 24 | s 6 10 | 1 23 | 5 9 |
| 15 | Frid. | r 5 40 | 2 39 | 9 26 | r 5 41 | 2 43 | 6 11 |
| 16 | Satur. | s 6 7 | 3 58 | 10 18 | s 6 7 | 4 1 | 7 4 |
| 17 | ☩ | r 5 42 | sets | 11 5 | r 5 43 | sets | 7 47 |
| 18 | Mon. | s 6 4 | 6 21 | 11 44 | s 6 4 | 6 22 | 8 27 |
| 19 | Tues. | r 5 44 | 6 42 | 0 3 | r 5 45 | 6 45 | 9 9 |
| 20 | Wed. | s 6 0 | 7 5 | 0 43 | s 6 0 | 7 9 | 9 50 |
| 21 | Thur. | r 5 46 | 7 33 | 1 24 | r 5 47 | 7 38 | 10 29 |
| 22 | Frid. | s 5 57 | 8 7 | 2 6 | s 5 57 | 8 13 | 11 11 |
| 23 | Satur. | r 5 49 | 8 47 | 2 51 | r 5 49 | 8 54 | 11 59 |
| 24 | ☩ | s 5 53 | 9 34 | 3 39 | s 5 54 | 9 42 | 0 25 |
| 25 | Mon. | r 5 51 | 10 29 | 4 34 | r 5 51 | 10 36 | 1 21 |
| 26 | Tues. | s 5 50 | 11 30 | 5 33 | s 5 50 | 11 36 | 2 19 |
| 27 | Wed. | r 5 53 | morn | 6 35 | r 5 53 | morn | 3 21 |
| 28 | Thur. | s 5 46 | 0 35 | 7 33 | s 5 47 | 0 40 | 4 18 |
| 29 | Frid. | r 5 55 | 1 41 | 8 26 | r 5 55 | 1 45 | 5 10 |
| 30 | Satur. | s 5 43 | 2 47 | 9 14 | s 5 43 | 2 50 | 6 0 |
| .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

# OCTOBER.

Full Moon, 3rd day, 6h. 12m. A.M.
Last Quarter, 10th day, 5h. 36m. A.M.
New Moon, 17th day, 5h. 13m. A.M.
First Quarter, 25th day, 3h. 10m. A.M.

| 1876. | | BOSTON. | | | NEW YORK. | | |
|---|---|---|---|---|---|---|---|
| | | Sun R. & S. | Moon R. & S. | High Water. | Sun R. & S. | Moon R. & S. | High Water. |
| 1 | ☿ | r 5 57 | 3 53 | 9 58 | r 5 57 | 3 55 | 6 44 |
| 2 | Mon. | s 5 39 | 4 59 | 10 39 | s 5 40 | 4 59 | 7 24 |
| 3 | Tues. | r 6 0 | rises | 11 18 | r 5 59 | rises | 8 0 |
| 4 | Wed. | s 5 36 | 5 56 | 11 55 | s 5 37 | 5 59 | 8 39 |
| 5 | Thur. | r 6 2 | 6 24 | 0 15 | r 6 1 | 6 29 | 9 22 |
| 6 | Frid. | s 5 33 | 6 59 | 0 57 | s 5 33 | 7 5 | 10 6 |
| 7 | Satur. | r 6 4 | 7 44 | 1 45 | r 6 3 | 7 51 | 10 54 |
| 8 | ☿ | s 5 29 | 8 40 | 2 37 | s 5 30 | 8 48 | 11 50 |
| 9 | Mon. | r 6 6 | 9 48 | 3 35 | r 6 5 | 9 55 | 0 21 |
| 10 | Tues. | s 5 26 | 11 4 | 4 41 | s 5 27 | 11 10 | 1 28 |
| 11 | Wed. | r 6 9 | morn | 5 53 | r 6 7 | morn | 2 38 |
| 12 | Thur. | s 5 23 | 0 22 | 7 1 | s 5 24 | 0 27 | 3 47 |
| 13 | Frid. | r 6 11 | 1 40 | 8 5 | r 6 9 | 1 43 | 4 50 |
| 14 | Satur. | s 5 19 | 2 55 | 9 0 | s 5 21 | 2 57 | 5 45 |
| 15 | ☿ | r 6 14 | 4 8 | 9 47 | r 6 11 | 4 8 | 6 34 |
| 16 | Mon. | s 5 16 | 5 19 | 10 32 | s 5 18 | 5 18 | 7 17 |
| 17 | Tues. | r 6 16 | sets | 11 14 | r 6 14 | sets | 7 56 |
| 18 | Wed. | s 5 13 | 5 33 | 11 53 | s 5 15 | 5 38 | 8 36 |
| 19 | Thur. | r 6 18 | 6 3 | 0 13 | r 6 16 | 6 9 | 9 21 |
| 20 | Frid. | s 5 10 | 6 40 | 0 56 | s 5 12 | 6 47 | 10 3 |
| 21 | Satur. | r 6 20 | 7 25 | 1 40 | r 6 18 | 7 32 | 10 47 |
| 22 | ☿ | s 5 7 | 8 18 | 2 28 | s 5 9 | 8 25 | 11 35 |
| 23 | Mon. | r 6 23 | 9 18 | 3 15 | r 6 20 | 9 25 | 0 0 |
| 24 | Tues. | s 5 4 | 10 21 | 4 5 | s 5 6 | 10 27 | 0 52 |
| 25 | Wed. | r 6 25 | 11 25 | 5 0 | r 6 23 | 11 30 | 1 46 |
| 26 | Thur. | s 5 1 | morn | 5 55 | s 5 4 | morn | 2 41 |
| 27 | Frid. | r 6 28 | 0 30 | 6 50 | r 6 25 | 0 33 | 3 35 |
| 28 | Satur. | s 4 58 | 1 35 | 7 40 | s 5 1 | 1 37 | 4 25 |
| 29 | ☿ | r 6 30 | 2 41 | 8 29 | r 6 27 | 2 42 | 5 13 |
| 30 | Mon. | s 4 56 | 3 48 | 9 15 | s 4 59 | 3 47 | 6 1 |
| 31 | Tues. | r 6 33 | 4 58 | 10 0 | r 6 30 | 4 56 | 6 46 |

# NOVEMBER.

Full Moon, 1st day, 6h. 47m. P.M.
Last Quarter, 8th day, 0h. 33m. P.M.
New Moon, 15th day, 8h. 4m. P.M.
First Quarter, 23rd day, 11h. 42m. P.M.

| 1876. | | BOSTON. | | | NEW YORK. | | |
|---|---|---|---|---|---|---|---|
| | | Sun R. & S. | Moon R. & S. | High Water. | Sun R. & S. | Moon R. & S. | High Water. |
| 1 | Wed. | r 6 34 | 6 11 | 10 46 | r 6 31 | 6 8 | 7 30 |
| 2 | Thur. | s 4 52 | rises | 11 30 | s 4 55 | rises | 8 12 |
| 3 | Frid. | r 6 36 | 5 38 | ..... | r 6 33 | 5 45 | 9 4 |
| 4 | Satur. | s 4 49 | 6 31 | 0 43 | s 4 53 | 6 38 | 9 55 |
| 5 | ☿ | r 6 39 | 7 39 | 1 37 | r 6 36 | 7 46 | 10 49 |
| 6 | Mon. | s 4 47 | 8 55 | 2 35 | s 4 50 | 9 1 | 11 48 |
| 7 | Tues. | r 6 41 | 10 13 | 3 33 | r 6 38 | 10 18 | 0 19 |
| 8 | Wed. | s 4 45 | 11 30 | 4 35 | s 4 48 | 11 34 | 1 21 |
| 9 | Thur. | r 6 44 | morn | 5 37 | r 6 41 | morn | 2 23 |
| 10 | Frid. | s 4 43 | 0 44 | 6 37 | s 4 46 | 0 46 | 3 22 |
| 11 | Satur. | r 6 46 | 1 56 | 7 34 | r 6 43 | 1 57 | 4 18 |
| 12 | ☿ | s 4 41 | 3 6 | 8 26 | s 4 44 | 3 5 | 5 10 |
| 13 | Mon. | r 6 49 | 4 16 | 9 15 | r 6 45 | 4 14 | 6 1 |
| 14 | Tues. | s 4 39 | 5 26 | 10 1 | s 4 43 | 5 22 | 6 47 |
| 15 | Wed. | r 6 52 | 6 35 | 10 45 | r 6 47 | 6 30 | 7 30 |
| 16 | Thur. | s 4 37 | sets | 11 29 | s 4 41 | sets | 8 11 |
| 17 | Frid. | r 6 54 | 5 19 | ..... | r 6 50 | 5 26 | 8 57 |
| 18 | Satur. | s 4 35 | 6 9 | 0 34 | s 4 40 | 6 16 | 9 43 |
| 19 | ☿ | r 6 56 | 7 6 | 1 19 | r 6 52 | 7 13 | 10 27 |
| 20 | Mon. | s 4 34 | 8 8 | 2 5 | s 4 38 | 8 14 | 11 10 |
| 21 | Tues. | r 6 59 | 9 13 | 2 50 | r 6 55 | 9 18 | 11 57 |
| 22 | Wed. | s 4 33 | 10 17 | 3 35 | s 4 37 | 10 21 | 0 21 |
| 23 | Thur. | r 7 1 | 11 21 | 4 20 | r 6 57 | 11 24 | 1 7 |
| 24 | Frid. | s 4 32 | morn | 5 8 | s 4 36 | morn | 1 54 |
| 25 | Satur. | r 7 4 | 0 24 | 5 57 | r 6 59 | 0 25 | 2 43 |
| 26 | ☿ | s 4 31 | 1 29 | 6 49 | s 4 36 | 1 29 | 3 34 |
| 27 | Mon. | r 7 6 | 2 36 | 7 39 | r 7 1 | 2 35 | 4 24 |
| 28 | Tues. | s 4 30 | 3 46 | 8 31 | s 4 35 | 3 43 | 5 15 |
| 29 | Wed. | r 7 8 | 5 1 | 9 23 | r 7 3 | 4 57 | 6 9 |
| 30 | Thur. | s 4 29 | 6 20 | 10 18 | s 4 34 | 6 14 | 7 4 |
| .. | ..... | ..... | ..... | .... | ..... | ..... | ..... |

# DECEMBER.

| | | |
|---|---|---|
| Full Moon, | 1st day, | 6h. 20m. A. M. |
| Last Quarter, | 7th day, | 9h. 39m. P. M. |
| New Moon, | 15th day, | 1h. 30m. P. M. |
| First Quarter, | 23rd day, | 6h. 57m. P. M. |
| Full Moon, | 30th day, | 5h. 15m. P. M. |

| 1876. | | BOSTON. | | | NEW YORK. | | |
|---|---|---|---|---|---|---|---|
| | | Sun R. & S. | Moon R. & S. | High Water. | Sun R. & S. | Moon R. & S. | High Water. |
| 1 | Frid. | r 7 10 | rises | 11 13 | r 7 5 | rises | 7 55 |
| 2 | Satur. | s 4 28 | 5 21 | ..... | s 4 33 | 5 28 | 8 52 |
| 3 | ☩ | r 7 12 | 6 37 | 0 35 | r 7 7 | 6 43 | 9 50 |
| 4 | Mon. | s 4 28 | 7 58 | 1 33 | s 4 33 | 8 3 | 10 44 |
| 5 | Tues. | r 7 14 | 9 18 | 2 28 | r 7 9 | 9 22 | 11 38 |
| 6 | Wed. | s 4 28 | 10 35 | 3 21 | s 4 33 | 10 37 | 0 6 |
| 7 | Thur. | r 7 16 | 11 48 | 4 13 | r 7 11 | 11 49 | 1 0 |
| 8 | Frid. | s 4 28 | morn | 5 7 | s 4 33 | morn | 1 54 |
| 9 | Satur. | r 7 18 | 0 58 | 6 2 | r 7 13 | 0 58 | 2 48 |
| 10 | ☩ | s 4 28 | 2 7 | 6 56 | s 4 33 | 2 5 | 3 41 |
| 11 | Mon. | r 7 20 | 3 16 | 7 49 | r 7 15 | 3 13 | 4 33 |
| 12 | Tues. | s 4 28 | 4 25 | 8 41 | s 4 33 | 4 20 | 5 26 |
| 13 | Wed. | r 7 21 | 5 33 | 9 32 | r 7 16 | 5 27 | 6 18 |
| 14 | Thur. | s 4 29 | 6 39 | 10 22 | s 4 34 | 6 32 | 7 8 |
| 15 | Frid. | r 7 23 | sets | 11 10 | r 7 18 | sets | 7 52 |
| 16 | Satur. | s 4 29 | 4 57 | 11 54 | s 4 34 | 5 4 | 8 38 |
| 17 | ☩ | r 7 24 | 5 59 | 0 16 | r 7 19 | 6 5 | 9 24 |
| 18 | Mon. | s 4 29 | 7 3 | 0 59 | s 4 35 | 7 8 | 10 6 |
| 19 | Tues. | r 7 25 | 8 7 | 1 41 | r 7 20 | 8 11 | 10 44 |
| 20 | Wed. | s 4 31 | 9 10 | 2 21 | s 4 36 | 9 13 | 11 23 |
| 21 | Thur. | r 7 26 | 10 12 | 3 0 | r 7 21 | 10 14 | ..... |
| 22 | Frid. | s 4 32 | 11 15 | 3 39 | s 4 37 | 11 15 | 0 25 |
| 23 | Satur. | r 7 27 | morn | 4 21 | r 7 22 | morn | 1 8 |
| 24 | ☩ | s 4 33 | 0 18 | 5 6 | s 4 38 | 0 17 | 1 52 |
| 25 | Mon. | r 7 28 | 1 25 | 5 57 | r 7 23 | 1 23 | 2 43 |
| 26 | Tues. | s 4 34 | 2 36 | 6 52 | s 4 39 | 2 32 | 3 37 |
| 27 | Wed. | r 7 29 | 3 51 | 7 54 | r 7 23 | 3 46 | 4 39 |
| 28 | Thur. | s 4 35 | 5 9 | 8 56 | s 4 41 | 5 3 | 5 41 |
| 29 | Frid. | r 7 29 | 6 27 | 10 0 | r 7 24 | 6 20 | 6 46 |
| 30 | Satur. | s 4 37 | rises | 11 2 | s 4 42 | rises | 7 45 |
| 31 | ☩ | r 7 30 | 5 29 | 11 59 | r 7 24 | 5 35 | 8 43 |

# CHICAGO ALMANAC, 1876.

## JANUARY.

| | |
|---|---|
| First Q'ter, | 4d.9h.34m.a.m. |
| Full Moon, | 11d.0h.33m.a.m. |
| Last Q'ter, | 18d.2h.59m.a.m. |
| New Moon, | 26d.7h.52m.a.m. |

| D. M. | D. of W. | Sun Rises | Sun Sets. | Moon R.& S. |
|---|---|---|---|---|
| 1 | Sa. | 7 29 | 4 38 | 9 34 |
| 2 | ☩ | 7 29 | 4 39 | 10 41 |
| 3 | M. | 7 29 | 4 40 | 11 49 |
| 4 | Tu. | 7 29 | 4 41 | morn |
| 5 | W. | 7 29 | 4 42 | 0 59 |
| 6 | Th. | 7 29 | 4 43 | 2 14 |
| 7 | Fr. | 7 29 | 4 44 | 3 34 |
| 8 | Sa. | 7 28 | 4 45 | 4 55 |
| 9 | ☩ | 7 28 | 4 46 | 6 11 |
| 10 | M | 7 28 | 4 47 | 7 19 |
| 11 | Tu. | 7 28 | 4 48 | rises |
| 12 | W. | 7 27 | 4 49 | 6 38 |
| 13 | Th. | 7 27 | 4 51 | 7 56 |
| 14 | Fr. | 7 26 | 4 52 | 9 9 |
| 15 | Sa. | 7 26 | 4 53 | 10 19 |
| 16 | ☩ | 7 26 | 4 54 | 11 26 |
| 17 | M. | 7 25 | 4 55 | morn |
| 18 | Tu. | 7 25 | 4 57 | 0 31 |
| 19 | W. | 7 24 | 4 58 | 1 36 |
| 20 | Th. | 7 24 | 4 59 | 2 41 |
| 21 | Fr. | 7 23 | 5 0 | 3 45 |
| 22 | Sa. | 7 22 | 5 1 | 4 45 |
| 23 | ☩ | 7 22 | 5 3 | 5 41 |
| 24 | M. | 7 21 | 5 4 | 6 30 |
| 25 | Tu. | 7 20 | 5 5 | sets |
| 26 | W. | 7 19 | 5 6 | 5 13 |
| 27 | Th. | 7 18 | 5 7 | 6 21 |
| 28 | Fr. | 7 18 | 5 9 | 7 28 |
| 29 | Sa. | 7 17 | 5 10 | 8 34 |
| 30 | ☩ | 7 16 | 5 11 | 9 42 |
| 31 | M. | 7 15 | 5 12 | 10 51 |

## FEBRUARY.

| | |
|---|---|
| First Q'ter, | 2d. 8h. 3m.p.m. |
| Full Moon, | 9d.11h.57m.a.m. |
| Last Q'ter, | 16d.11h. 6m.p.m. |
| New Moon, | 25d. 0h.30m.a.m. |

| D. M. | D. of W. | Sun Rises | Sun Sets. | Moon R.& S. |
|---|---|---|---|---|
| 1 | Tu. | 7 14 | 5 14 | morn |
| 2 | W. | 7 13 | 5 15 | 0 2 |
| 3 | Th. | 7 12 | 5 17 | 1 18 |
| 4 | Fr. | 7 11 | 5 18 | 2 36 |
| 5 | Sa. | 7 10 | 5 19 | 3 51 |
| 6 | ☩ | 7 9 | 5 20 | 5 1 |
| 7 | M. | 7 7 | 5 22 | 6 0 |
| 8 | Tu. | 7 6 | 5 23 | 6 47 |
| 9 | W. | 7 5 | 5 24 | rises |
| 10 | Th. | 7 4 | 5 25 | 6 45 |
| 11 | Fr. | 7 2 | 5 27 | 7 56 |
| 12 | Sa. | 7 1 | 5 28 | 9 6 |
| 13 | ☩ | 6 59 | 5 30 | 10 14 |
| 14 | M. | 6 58 | 5 31 | 11 20 |
| 15 | Tu. | 6 57 | 5 32 | morn |
| 16 | W. | 6 55 | 5 33 | 0 27 |
| 17 | Th. | 6 54 | 5 35 | 1 33 |
| 18 | Fr. | 6 52 | 5 36 | 2 35 |
| 19 | Sa. | 6 51 | 5 37 | 3 34 |
| 20 | ☩ | 6 50 | 5 38 | 4 26 |
| 21 | M. | 6 48 | 5 39 | 5 10 |
| 22 | Tu. | 6 47 | 5 41 | 5 47 |
| 23 | W. | 6 45 | 5 42 | 6 17 |
| 24 | Th. | 6 44 | 5 43 | sets |
| 25 | Fr. | 6 42 | 5 44 | 6 22 |
| 26 | Sa | 6 41 | 5 46 | 7 31 |
| 27 | ☩ | 6 39 | 5 47 | 8 41 |
| 28 | M. | 6 37 | 5 48 | 9 53 |
| 29 | Tu. | 6 36 | 5 50 | 11 9 |
| .. | .. | .... | .... | ..... |
| .. | .. | .... | .... | ..... |

## MARCH.

First Q'ter, 3d. 3h.58m.a.m.
Full Moon, 10d. 0h.22m.a.m.
Last Q'ter, 17d. 7h.34m.p.m.
New Moon, 25d. 2h.22m.p.m.

| D. M. | D. of W. | Sun Rises | Sun Sets. | Moon R.& S. |
|---|---|---|---|---|
| 1 | W. | 6 34 | 5 51 | morn |
| 2 | Th. | 6 32 | 5 52 | 0 26 |
| 3 | Fr. | 6 31 | 5 53 | 1 41 |
| 4 | Sa. | 6 29 | 5 55 | 2 51 |
| 5 | S | 6 28 | 5 56 | 3 52 |
| 6 | M. | 6 26 | 5 57 | 4 42 |
| 7 | Tu. | 6 24 | 5 58 | 5 19 |
| 8 | W. | 6 23 | 5 59 | 5 48 |
| 9 | Th. | 6 21 | 6 0 | rises |
| 10 | Fr. | 6 20 | 6 1 | 6 46 |
| 11 | Sa. | 6 18 | 6 2 | 7 54 |
| 12 | S | 6 16 | 6 3 | 9 1 |
| 13 | M. | 6 14 | 6 4 | 10 10 |
| 14 | Tu. | 6 13 | 6 6 | 11 18 |
| 15 | W. | 6 11 | 6 7 | morn |
| 16 | Th. | 6 9 | 6 8 | 0 23 |
| 17 | Fr. | 6 7 | 6 9 | 1 22 |
| 18 | Sa. | 6 5 | 6 10 | 2 17 |
| 19 | S | 6 4 | 6 12 | 3 5 |
| 20 | M. | 6 2 | 6 13 | 3 46 |
| 21 | Tu. | 6 0 | 6 14 | 4 18 |
| 22 | W. | 5 58 | 6 15 | 4 44 |
| 23 | Th. | 5 57 | 6 16 | 5 7 |
| 24 | Fr. | 5 55 | 6 17 | 5 28 |
| 25 | Sa. | 5 54 | 6 18 | sets |
| 26 | S | 5 52 | 6 19 | 7 37 |
| 27 | M. | 5 50 | 6 20 | 8 54 |
| 28 | Tu. | 5 49 | 6 21 | 10 12 |
| 29 | W. | 5 47 | 6 23 | 11 31 |
| 30 | Th. | 5 46 | 6 24 | morn |
| 31 | Fr. | 5 44 | 6 25 | 0 44 |

## APRIL.

First Q'ter, 1d.10h.22m.a.m.
Full Moon, 8d. 1h.49m.p.m.
Last Q'ter, 16d. 2h.47m.p.m.
New Moon, 24d. 1h.13m.a.m.
First Q'ter, 30d. 4h.37m.p.m.

| D. M. | D. of W. | Sun Rises | Sun Sets. | Moon R.& S. |
|---|---|---|---|---|
| 1 | Sa. | 5 42 | 6 26 | 1 48 |
| 2 | S | 5 40 | 6 27 | 2 41 |
| 3 | M. | 5 39 | 6 28 | 3 21 |
| 4 | Tu. | 5 37 | 6 29 | 3 52 |
| 5 | W. | 5 35 | 6 30 | 4 16 |
| 6 | Th. | 5 33 | 6 31 | 4 39 |
| 7 | Fr. | 5 32 | 6 32 | 4 59 |
| 8 | Sa. | 5 30 | 6 34 | rises |
| 9 | S | 5 29 | 6 35 | 7 51 |
| 10 | M. | 5 27 | 6 36 | 9 0 |
| 11 | Tu. | 5 25 | 6 37 | 10 7 |
| 12 | W. | 5 24 | 6 38 | 11 9 |
| 13 | Th. | 5 22 | 6 39 | morn |
| 14 | Fr. | 5 21 | 6 40 | 0 7 |
| 15 | Sa. | 5 19 | 6 41 | 0 59 |
| 16 | S | 5 17 | 6 42 | 1 42 |
| 17 | M. | 5 16 | 6 43 | 2 17 |
| 18 | Tu. | 5 14 | 6 45 | 2 44 |
| 19 | W. | 5 13 | 6 46 | 3 8 |
| 20 | Th. | 5 11 | 6 47 | 3 31 |
| 21 | Fr. | 5 9 | 6 48 | 3 52 |
| 22 | Sa | 5 8 | 6 49 | 4 12 |
| 23 | S | 5 6 | 6 50 | 4 34 |
| 24 | M. | 5 5 | 6 51 | sets |
| 25 | Tu. | 5 3 | 6 52 | 9 12 |
| 26 | W. | 5 2 | 6 53 | 10 29 |
| 27 | Th. | 5 1 | 6 54 | 11 39 |
| 28 | Fr. | 4 59 | 6 55 | morn |
| 29 | Sa. | 4 58 | 6 56 | 0 37 |
| 30 | S | 4 57 | 6 57 | 1 22 |
| .. | .... | .... | .... | ..... |

CHICAGO ALMANAC, 1876.

## MAY.

Full Moon, 8d. 4h. 3m.a.m.
Last Q'ter, 16d. 7h.37m.a.m.
New Moon, 23d. 9h.35m.a.m.
First Q'ter, 29d.11h.59m.p.m.

| D. M. | D. of W. | Sun Rises | Sun Sets. | Moon R.& S. |
|---|---|---|---|---|
| 1 | M. | 4 56 | 6 58 | 1 56 |
| 2 | Tu. | 4 54 | 6 59 | 2 22 |
| 3 | W. | 4 53 | 7 1 | 2 45 |
| 4 | Th. | 4 51 | 7 2 | 3 5 |
| 5 | Fr. | 4 50 | 7 3 | 3 25 |
| 6 | Sa. | 4 49 | 7 4 | 3 45 |
| 7 | S | 4 48 | 7 5 | 4 7 |
| 8 | M. | 4 46 | 7 6 | rises |
| 9 | Tu. | 4 45 | 7 7 | 8 59 |
| 10 | W. | 4 44 | 7 8 | 9 58 |
| 11 | Th. | 4 43 | 7 9 | 10 52 |
| 12 | Fr. | 4 42 | 7 10 | 11 38 |
| 13 | Sa. | 4 41 | 7 11 | morn |
| 14 | S | 4 40 | 7 12 | 0 16 |
| 15 | M. | 4 39 | 7 13 | 0 45 |
| 16 | Tu. | 4 38 | 7 14 | 1 10 |
| 17 | W. | 4 37 | 7 15 | 1 32 |
| 18 | Th. | 4 37 | 7 16 | 1 53 |
| 19 | Fr. | 4 36 | 7 17 | 2 12 |
| 20 | Sa. | 4 35 | 7 18 | 2 33 |
| 21 | S | 4 34 | 7 19 | 2 58 |
| 22 | M. | 4 33 | 7 20 | 3 27 |
| 23 | Tu. | 4 33 | 7 20 | sets |
| 24 | W. | 4 32 | 7 21 | 9 21 |
| 25 | Th. | 4 31 | 7 22 | 10 26 |
| 26 | Fr. | 4 30 | 7 23 | 11 17 |
| 27 | Sa. | 4 30 | 7 24 | 11 55 |
| 28 | S | 4 29 | 7 25 | morn |
| 29 | M. | 4 29 | 7 26 | 0 25 |
| 30 | Tu. | 4 28 | 7 27 | 0 50 |
| 31 | W. | 4 28 | 7 28 | 1 11 |

## JUNE.

Full Moon, 6d. 6h.47m.p.m.
Last Q'ter, 14d. 9h.24m.p.m.
New Moon, 21d. 4h.27m.p.m.
First Q'ter, 28d. 9h.24m.a.m.

| D. M. | D. of W. | Sun Rises | Sun Sets. | Moon R.& S. |
|---|---|---|---|---|
| 1 | Th. | 4 27 | 7 28 | 1 31 |
| 2 | Fr. | 4 27 | 7 29 | 1 50 |
| 3 | Sa. | 4 26 | 7 29 | 2 12 |
| 4 | S | 4 26 | 7 30 | 2 36 |
| 5 | M. | 4 26 | 7 31 | 3 4 |
| 6 | Tu. | 4 26 | 7 31 | rises |
| 7 | W. | 4 25 | 7 32 | 8 47 |
| 8 | Th. | 4 25 | 7 32 | 9 34 |
| 9 | Fr. | 4 25 | 7 33 | 10 14 |
| 10 | Sa. | 4 25 | 7 34 | 10 46 |
| 11 | S | 4 25 | 7 34 | 11 13 |
| 12 | M. | 4 24 | 7 35 | 11 36 |
| 13 | Tu. | 4 24 | 7 35 | 11 57 |
| 14 | W. | 4 24 | 7 36 | morn |
| 15 | Th. | 4 24 | 7 36 | 0 16 |
| 16 | Fr. | 4 24 | 7 36 | 0 34 |
| 17 | Sa. | 4 25 | 7 37 | 0 56 |
| 18 | S | 4 25 | 7 37 | 1 22 |
| 19 | M. | 4 25 | 7 37 | 1 54 |
| 20 | Tu. | 4 25 | 7 37 | 2 36 |
| 21 | W. | 4 25 | 7 37 | sets |
| 22 | Th. | 4 26 | 7 38 | 9 5 |
| 23 | Fr. | 4 26 | 7 38 | 9 50 |
| 24 | Sa | 4 26 | 7 38 | 10 24 |
| 25 | S | 4 26 | 7 38 | 10 51 |
| 26 | M. | 4 27 | 7 38 | 11 15 |
| 27 | Tu. | 4 27 | 7 38 | 11 35 |
| 28 | W. | 4 28 | 7 38 | 11 55 |
| 29 | Th. | 4 28 | 7 38 | morn |
| 30 | Fr. | 4 28 | 7 38 | 0 16 |
| .. | .... | .... | .... | ..... |

## JULY.

Full Moon, 6d. 9h.48m.a.m.
Last Q'ter, 14d. 8h. 6m.a.m.
New Moon, 20d.11h. 3m.p.m.
First Q'ter, 27d. 9h.29m.p.m.

| D. M. | D. of W. | Sun Rises | Sun Sets. | Moon R.& S. |
|---|---|---|---|---|
| 1 | Sa. | 4 29 | 7 38 | 0 38 |
| 2 | ☩ | 4 29 | 7 38 | 1 5 |
| 3 | M. | 4 30 | 7 38 | 1 38 |
| 4 | Tu. | 4 30 | 7 38 | 2 19 |
| 5 | W. | 4 31 | 7 38 | 3 6 |
| 6 | Th. | 4 32 | 7 37 | rises |
| 7 | Fr. | 4 32 | 7 37 | 8 49 |
| 8 | Sa. | 4 33 | 7 36 | 9 17 |
| 9 | ☩ | 4 34 | 7 36 | 9 40 |
| 10 | M | 4 35 | 7 35 | 10 1 |
| 11 | Tu. | 4 36 | 7 35 | 10 20 |
| 12 | W. | 4 36 | 7 34 | 10 39 |
| 13 | Th. | 4 37 | 7 34 | 10 58 |
| 14 | Fr. | 4 38 | 7 33 | 11 22 |
| 15 | Sa. | 4 39 | 7 32 | 11 50 |
| 16 | ☩ | 4 40 | 7 32 | morn |
| 17 | M. | 4 40 | 7 31 | 0 26 |
| 18 | Tu. | 4 41 | 7 31 | 1 13 |
| 19 | W. | 4 42 | 7 30 | 2 14 |
| 20 | Th. | 4 43 | 7 29 | sets |
| 21 | Fr. | 4 44 | 7 28 | 8 19 |
| 22 | Sa. | 4 44 | 7 28 | 8 49 |
| 23 | ☩ | 4 45 | 7 27 | 9 15 |
| 24 | M. | 4 46 | 7 26 | 9 38 |
| 25 | Tu. | 4 47 | 7 25 | 9 58 |
| 26 | W. | 4 48 | 7 24 | 10 19 |
| 27 | Th. | 4 49 | 7 23 | 10 42 |
| 28 | Fr. | 4 50 | 7 22 | 11 8 |
| 29 | Sa. | 4 51 | 7 21 | 11 38 |
| 30 | ☩ | 4 52 | 7 20 | morn |
| 31 | M. | 4 53 | 7 19 | 0 16 |

## AUGUST.

Full Moon, 5d. 0h.48m.a.m.
Last Q'ter, 12d. 4h. 9m.p.m.
New Moon, 19d. 6h.36m.a.m.
First Q'ter, 25d. 0h.28m.p.m.

| D. M. | D. of W. | Sun Rises | Sun Sets. | Moon R.& S. |
|---|---|---|---|---|
| 1 | Tu. | 4 54 | 7 18 | 1 1 |
| 2 | W. | 4 55 | 7 17 | 1 55 |
| 3 | Th. | 4 56 | 7 16 | 2 55 |
| 4 | Fr. | 4 57 | 7 15 | rises |
| 5 | Sa. | 4 58 | 7 14 | 7 46 |
| 6 | ☩ | 4 59 | 7 12 | 8 7 |
| 7 | M. | 5 0 | 7 11 | 8 27 |
| 8 | Tu. | 5 1 | 7 10 | 8 45 |
| 9 | W. | 5 2 | 7 9 | 9 4 |
| 10 | Th. | 5 3 | 7 7 | 9 27 |
| 11 | Fr. | 5 4 | 7 6 | 9 52 |
| 12 | Sa. | 5 5 | 7 4 | 10 23 |
| 13 | ☩ | 5 6 | 7 3 | 11 3 |
| 14 | M. | 5 7 | 7 1 | 11 56 |
| 15 | Tu. | 5 8 | 7 0 | morn |
| 16 | W. | 5 9 | 6 58 | 1 3 |
| 17 | Th. | 5 10 | 6 57 | 2 21 |
| 18 | Fr. | 5 11 | 6 55 | 3 45 |
| 19 | Sa. | 5 12 | 6 54 | sets |
| 20 | ☩ | 5 13 | 6 52 | 7 38 |
| 21 | M. | 5 15 | 6 51 | 7 59 |
| 22 | Tu. | 5 16 | 6 49 | 8 21 |
| 23 | W. | 5 17 | 6 48 | 8 44 |
| 24 | Th. | 5 18 | 6 46 | 9 8 |
| 25 | Fr. | 5 19 | 6 45 | 9 37 |
| 26 | Sa | 5 20 | 6 43 | 10 12 |
| 27 | ☩ | 5 21 | 6 42 | 10 56 |
| 28 | M. | 5 22 | 6 40 | 11 47 |
| 29 | Tu. | 5 23 | 6 38 | morn |
| 30 | W. | 5 24 | 6 37 | 0 45 |
| 31 | Th. | 5 25 | 6 35 | 1 47 |

CHICAGO ALMANAC, 1876.

## SEPTEMBER.

Full Moon, 3d. 3h.23m.p.m.
Last Q'ter, 10d.10h.31m.p.m.
New Moon, 17d. 4h. 4m.p.m.
First Q'ter, 25d. 6h.13m.a.m.

| D. M. | D. of W. | Sun Rises | Sun Sets. | Moon R.& S. |
|---|---|---|---|---|
| 1 | Fr. | 5 26 | 6 34 | 2 52 |
| 2 | Sa. | 5 27 | 6 32 | 3 59 |
| 3 | ☩ | 5 28 | 6 30 | rises |
| 4 | M. | 5 29 | 6 28 | 6 52 |
| 5 | Tu. | 5 30 | 6 27 | 7 11 |
| 6 | W. | 5 31 | 6 25 | 7 32 |
| 7 | Th. | 5 32 | 6 23 | 7 55 |
| 8 | Fr. | 5 33 | 6 21 | 8 24 |
| 9 | Sa. | 5 34 | 6 20 | 9 1 |
| 10 | ☩ | 5 35 | 6 18 | 9 50 |
| 11 | M. | 5 36 | 6 17 | 10 50 |
| 12 | Tu. | 5 37 | 6 15 | morn |
| 13 | W. | 5 38 | 6 13 | 0 2 |
| 14 | Th. | 5 39 | 6 11 | 1 20 |
| 15 | Fr. | 5 41 | 6 10 | 2 42 |
| 16 | Sa. | 5 42 | 6 8 | 4 1 |
| 17 | ☩ | 5 43 | 6 6 | sets |
| 18 | M. | 5 44 | 6 4 | 6 23 |
| 19 | Tu. | 5 45 | 6 2 | 6 45 |
| 20 | W. | 5 46 | 6 1 | 7 8 |
| 21 | Th. | 5 46 | 5 59 | 7 36 |
| 22 | Fr. | 5 47 | 5 57 | 8 10 |
| 23 | Sa. | 5 48 | 5 55 | 8 51 |
| 24 | ☩ | 5 49 | 5 53 | 9 38 |
| 25 | M. | 5 51 | 5 52 | 10 33 |
| 26 | Tu. | 5 52 | 5 50 | 11 33 |
| 27 | W. | 5 53 | 5 48 | morn |
| 28 | Th. | 5 54 | 5 46 | 0 38 |
| 29 | Fr. | 5 55 | 5 45 | 1 44 |
| 30 | Sa. | 5 57 | 5 43 | 2 50 |
| .. | .... | .... | .... | ..... |

## OCTOBER.

Full Moon, 3d. 5h. 6m.a.m.
Last Q'ter, 10d. 4h.30m.a.m.
New Moon, 17d. 4h. 7m.a.m.
First Q'ter, 25d. 2h. 4m.a.m.

| D. M. | D. of W. | Sun Rises | Sun Sets. | Moon R.& S. |
|---|---|---|---|---|
| 1 | ☩ | 5 58 | 5 42 | 3 55 |
| 2 | M. | 5 59 | 5 40 | 5 1 |
| 3 | Tu. | 6 0 | 5 38 | rises |
| 4 | W. | 6 1 | 5 36 | 5 59 |
| 5 | Th. | 6 2 | 5 35 | 6 27 |
| 6 | Fr. | 6 3 | 5 33 | 7 2 |
| 7 | Sa. | 6 4 | 5 31 | 7 48 |
| 8 | ☩ | 6 5 | 5 29 | 8 44 |
| 9 | M. | 6 6 | 5 28 | 9 52 |
| 10 | Tu. | 6 8 | 5 26 | 11 7 |
| 11 | W. | 6 9 | 5 25 | morn |
| 12 | Th. | 6 10 | 5 23 | 0 25 |
| 13 | Fr. | 6 11 | 5 21 | 1 43 |
| 14 | Sa. | 6 12 | 5 20 | 2 57 |
| 15 | ☩ | 6 14 | 5 18 | 4 10 |
| 16 | M. | 6 15 | 5 17 | 5 21 |
| 17 | Tu. | 6 16 | 5 15 | sets |
| 18 | W. | 6 17 | 5 14 | 5 36 |
| 19 | Th. | 6 18 | 5 12 | 6 6 |
| 20 | Fr. | 6 19 | 5 11 | 6 44 |
| 21 | Sa | 6 20 | 5 9 | 7 29 |
| 22 | ☩ | 6 21 | 5 8 | 8 22 |
| 23 | M. | 6 22 | 5 6 | 9 21 |
| 24 | Tu. | 6 24 | 5 5 | 10 24 |
| 25 | W. | 6 25 | 5 3 | 11 28 |
| 26 | Th. | 6 27 | 5 2 | morn |
| 27 | Fr. | 6 28 | 5 0 | 0 33 |
| 28 | Sa. | 6 29 | 4 59 | 1 37 |
| 29 | ☩ | 6 30 | 4 58 | 2 43 |
| 30 | M | 6 32 | 4 56 | 3 50 |
| 31 | Tu. | 6 33 | 4 55 | 5 0 |

# CHICAGO ALMANAC, 1876.

## NOVEMBER.

Full Moon, 1d. 5h.41m.p.m.
Last Q'ter, 8d.11h.27m.a.m.
New Moon, 15d. 6h.58m.p.m.
First Q'ter, 23d.10h.36m.p.m.

| D. M. | D. of W. | Sun Rises | Sun Sets. | Moon R.& S. |
|---|---|---|---|---|
| 1 | W. | 6 34 | 4 54 | 6 12 |
| 2 | Th. | 6 35 | 4 53 | rises |
| 3 | Fr. | 6 36 | 4 52 | 5 41 |
| 4 | Sa. | 6 38 | 4 50 | 6 35 |
| 5 | ☩ | 6 39 | 4 49 | 7 43 |
| 6 | M. | 6 40 | 4 48 | 8 58 |
| 7 | Tu. | 6 41 | 4 47 | 10 16 |
| 8 | W. | 6 42 | 4 46 | 11 33 |
| 9 | Th. | 6 44 | 4 44 | morn |
| 10 | Fr. | 6 45 | 4 43 | 0 46 |
| 11 | Sa. | 6 46 | 4 42 | 1 58 |
| 12 | ☩ | 6 47 | 4 41 | 3 8 |
| 13 | M. | 6 48 | 4 40 | 4 17 |
| 14 | Tu. | 6 50 | 4 40 | 5 27 |
| 15 | W. | 6 51 | 4 39 | 6 36 |
| 16 | Th. | 6 52 | 4 38 | sets |
| 17 | Fr. | 6 53 | 4 37 | 5 23 |
| 18 | Sa. | 6 54 | 4 36 | 6 13 |
| 19 | ☩ | 6 56 | 4 36 | 7 10 |
| 20 | M. | 6 57 | 4 35 | 8 11 |
| 21 | Tu. | 6 58 | 4 34 | 9 16 |
| 22 | W. | 6 59 | 4 33 | 10 20 |
| 23 | Th. | 7 0 | 4 33 | 11 24 |
| 24 | Fr. | 7 2 | 4 32 | morn |
| 25 | Sa. | 7 3 | 4 32 | 0 26 |
| 26 | ☩ | 7 4 | 4 31 | 1 31 |
| 27 | M. | 7 5 | 4 31 | 2 38 |
| 28 | Tu. | 7 6 | 4 30 | 3 47 |
| 29 | W. | 7 8 | 4 30 | 5 2 |
| 30 | Th. | 7 9 | 4 29 | 6 21 |

## DECEMBER.

Full Moon, 1d. 5h.14m.a.m.
Last Q'ter, 7d. 8h.33m.p.m.
New Moon, 15d. 0h.24m.p.m.
First Q'ter, 28d. 5h.51m.p.m.
Full Moon, 30d. 4h. 9m.p.m.

| D. M. | D. of W. | Sun Rises | Sun Sets. | Moon R.& S. |
|---|---|---|---|---|
| 1 | Fr. | 7 10 | 4 29 | rises |
| 2 | Sa. | 7 11 | 4 29 | 5 25 |
| 3 | ☩ | 7 12 | 4 29 | 6 40 |
| 4 | M. | 7 13 | 4 28 | 8 1 |
| 5 | Tu. | 7 14 | 4 28 | 9 21 |
| 6 | W. | 7 15 | 4 28 | 10 38 |
| 7 | Th. | 7 16 | 4 28 | 11 50 |
| 8 | Fr. | 7 17 | 4 28 | morn |
| 9 | Sa. | 7 17 | 4 28 | 1 0 |
| 10 | ☩ | 7 18 | 4 28 | 2 9 |
| 11 | M. | 7 19 | 4 28 | 3 17 |
| 12 | Tu. | 7 20 | 4 28 | 4 26 |
| 13 | W. | 7 21 | 4 28 | 5 34 |
| 14 | Th. | 7 21 | 4 29 | 6 40 |
| 15 | Fr. | 7 22 | 4 29 | sets |
| 16 | Sa. | 7 23 | 4 29 | 5 1 |
| 17 | ☩ | 7 24 | 4 29 | 6 2 |
| 18 | M. | 7 24 | 4 30 | 7 6 |
| 19 | Tu. | 7 25 | 4 30 | 8 10 |
| 20 | W. | 7 25 | 4 31 | 9 13 |
| 21 | Th. | 7 26 | 4 31 | 10 14 |
| 22 | Fr. | 7 26 | 4 32 | 11 17 |
| 23 | Sa | 7 27 | 4 32 | morn |
| 24 | ☩ | 7 27 | 4 33 | 0 20 |
| 25 | M. | 7 28 | 4 33 | 1 26 |
| 26 | Tu. | 7 28 | 4 34 | 2 37 |
| 27 | W. | 7 28 | 4 35 | 3 52 |
| 28 | Th. | 7 28 | 4 36 | 5 10 |
| 29 | Fr. | 7 29 | 4 36 | 6 27 |
| 30 | Sa. | 7 29 | 4 37 | rises |
| 31 | ☩ | 7 29 | 4 38 | 5 32 |



SATURDAY, JANUARY 1, 1876.

| | January. | Rec. | Paid |
|---|---|---|---|
| 1 | Cash on hand | | |

SUNDAY, JANUARY 2, 1876.

| | | | |
|---|---|---|---|
| | | R | P |



MONDAY, JANUARY 3, 1876.

| | | | |
|---|---|---|---|
| | | R | P |

TUESDAY, JANUARY 4, 1876.

| | | R | P |
|---|---|---|---|



WEDNESDAY, JANUARY 5, 1876.

| | | R | P |
|---|---|---|---|

THURSDAY, JANUARY 6, 1876.

| | | R | P |
|---|---|---|---|



FRIDAY, JANUARY 7, 1876.

| | | R | P |
|---|---|---|---|

SATURDAY, JANUARY 8, 1876.

| | | | | | |
|---|---|---|---|---|---|
| | | | | R | P |

SUNDAY, JANUARY 9, 1876.

| | | | | | |
|---|---|---|---|---|---|
| D | M | | | R | P |

MONDAY, JANUARY 10, 1876.

R P

TUESDAY, JANUARY 11, 1876.

R P

WEDNESDAY, JANUARY 12, 1876.

THURSDAY, JANUARY 13, 1876.

Description of caterpillars

FRIDAY, JANUARY 14, 1876.

No 1 = Coelocolonia distorta
" 3 = Gastropacha velleda?
" 4 = Limacodes ocellata?
" 5 = Euclea quercetis
" 7 = ( " " )

No. 2.

SATURDAY, JANUARY 15, 1876. (See Aug 26)

~~Description of cats found~~
~~September 5, 1882.~~
~~Color green (sometimes~~
~~brown) with a distinct~~
~~stripe on the back.~~
~~On the 3, 6, 7 & 10 segments~~
~~a brown spot. A few~~
~~hairs on each ring.~~
~~Being left untouch they~~
~~which at next place~~
somewhat resemble a
shining cocoon as
made of silk and bits
of substance on which it
is made. Thyzadia 8/10
in. long, brown and
shining (No. 2. See Nov 25

(see 536) No 6 (see June 14)

SUNDAY, JANUARY 16, 1876.

This caterpillar measures about 1 3/4 in. in length. The body and head are white; the back a stripe on the middle, and a row of spots on each side; black. The feet are red. It is covered with long white (sometimes yellow) hairs growing immediately from the skin, and rather thin. It has on the 2nd 3rd & 11th seg. a long black pencil; and in the rest of the

next page

No 6.

MONDAY, JANUARY 17, 1876.

(Cat. June 14)

rest (except the 4th) a few black hairs. It eats wild cherry, cherry and maple, and is found in Sept. No 6

No 7

Eat-found on clover Aug. 1885. guess the node. Length 1 3/4 inches. Last pair of legs not need. Black, dot on the segment. Head large and node. Color purple with 2 reddish longitudinal stripes on the back, across 3 black lines on each

TUESDAY, JANUARY 18, 1876.

wide crest on the back extending from the head to near the tail where they change into 2 black spots. Below on each side a yellow stripe. Black marks above each foot. A black elevated spot on each side of the 4th segment

Gasteropelon angulinum

(see BB 157)

WEDNESDAY, JANUARY 19, 1876.

Cat found on wild cherry Sept 17. '83. 1¼ in long. Color black, legs yellowish. Head black. 10 yellowish warts on each ring from which are a few white hairs. Along back an interrupted red stripe edged with velvety black, extending to the 10th segment. On the latter is a black elevation

Cat 127

Aerongeta ~~occidentalis~~ (?)
" lobeliae

(Larva known by French as Coquillet)

THURSDAY, JANUARY 20, 1876.

Green limacode, Sept 73 -
wild cherry. 2 Purple
spots. 10 or 12 red
larvae. (Probably described
in other book)
Green with a broad
yellow stripe on the back
which is [illegible] observed
by 2 large purple spots
edged with [illegible] and
contracted in 2 places.
There are 7 pair of little
red fleshy warts situated
before between & behind
the spots and if the
(H) contractions. (Aug 17)
Adoneta spinaloides



FRIDAY, JANUARY 21, 1876.

Notodonta from Crabb island
Plaat bosch on black oak.
Green head with 2 black
lines. Yellow stripe on
each side of back. white
dorsal line. Marked
irregularly on back
with purple. Also yellow
line on each side.
Hind feet not used.
When fully grown = 13 some
(dotting?)

~~Eucidonta bilineata~~
Smith

Heterocampa manteo
H.H.

V Limacodes from Wheeler Sept '85. Oval flat. green on back a ♡-shaped patch of red, dark purple bordered with yellow. a red spot toward head on wild cherry.

VI After shedding skin spot on back connected with spot near head.

~~Tortricidia testacea~~ ?
~~Homona rosinata~~ ?
~~Limacodes fasciola~~ ?
~~Tortricidia pallida~~ ? }
Tortricidia flamula }



* copied 12
1/27/98

All-green limacodes. The back is elevated into 2 ridges and it sometimes has a tail. Wild cherry, maple etc. (Probably described in other book) Sept. '85.
(Ten kinds. light or yellow-green and dark or blue green. These may be different species)
They are (May '86) -
Light green = Limacodes fasciola
* Dark green = Packardia albipunctata
(See Oct 8) (next to Packard)

MONDAY, JANUARY 24, 1876.

very much resembles 10 except that the purple is much more extensive continuing in a band with 4 lateral projections from the head to tail.
On elm Sept '83 at Livingston. Probably = 10.

Same as 10 no!

Saccharata Acilineata
See UC 206



TUESDAY, JANUARY 25, 1876.

Looper found on flowers of thistle (at Bell's dock) and aster (in the flower-bed) in Sept. '83. Color green with or without a reddish line along the back. The head is brownish and notched on top.
Found the chrysalis on Sept 9. Brownish yellow, lines on back and wing cases black.
Green with white strip images.

Synchlora subaenaria?

WEDNESDAY, JANUARY 26, 1876.

Caterpillar found in Aug and Sept. on white oak. Color white ish or reddish. Remain on the back of the leaf with its head turned to one side touching the body. (Very be described see the other book)

15B Same: on Beech July 27, 1890 Hd. pale white, and has a half inch in diameter. Several hairs growing from slight tubercles, 2 rows of each lobe most directed to the front. Body (See Sept 27)



Oak Bellport L. I. Aug 96
Setae bright in last 2 stages except bi. Brown a blotch dusky bluish d. spiracle, and by pale areas around i & ii. These areas reddish brown conspicuous with body sides slightly mottled. Tubercles white. Spiracle black. Tarsi vary a little in amount of dusky shading. Have

Traces of a yellowish d. line. Spots 3-12, 1 spot 3-4, two 6-10, quite fine one ① on 11 and a large △ spot (i-ii) on 12, iii dir with reddish ring

ovata

Aug 12 '90 Hd. flattened in front, deflexed

15 A

Lake Bellport L. I. Aug 96
Seen singly in last 2 days
except 1 i. Brown a blotches
darker blackish & spinge,
and by pale areas around
i & ii! These areas reddish
brown conspicuous with body
sides slightly mottled.
Antennae white
spinnerets black. Tarsi
vary a little in amount
of dusky shading. Have

have traces of lines in red
Hd mottled reticulated
with black on very pale
ground. W. 3.5
Are all dirty brown ex-
cept white tubercles.
to J.

hamamelis

15 B

Like 15A but no black shades, i & ii surrounded by bright yellow areas. Trace of a yellowish d. line. Spots 3–12, 12 spot 3–7, two 6–10, quite joined one (i) on 11 and a large △ spot (i–ii) on 12. iii clr with reddish ring.

over

Caterpillar found in Aug and Sept. on white oak. Color whitish or reddish. Remain on the back of the leaf with its head turned to one side under the body. (May be described in the other book)

15 B Same? on beech July 27, 1890 Hd pale whitish, antennae & palpi [illegible] partly black. Several hairs growing from slight tubercles, 2 near apex of each lobe most distinct. W. 1.4 mm. Body (See Sept 27)

Aug 1 '90 Hd. flattened in front, depressed at vertex, yellowish green, a black line from vertex of each lobe to each side of mouth, eyes black. mouth pale, jaws brown. W. 1.3 mm Body with dorsal process as in mat. but much slighter, none on 13; yellowish, tipped with brown. Body green with oblique white lines in s.d. space & a faint yellow substigmatal line with red brown spots below it on legless segs. Thor. feet testaceous and brown outwardly.

Aug 9 Hd bigger than wide, narrowing to vertex, flattened in front & depressed at vertex, green glistening, a black line as before, mouth pale, antennae whitish. W 2.1 mm Body as before, the processes all smaller except on 6 & 12, a slight one on 13 consisting of 2 small tubercles. Markings as before but more distinct, approaching the mat. form.

Aug 10 95

FRIDAY, JANUARY 28, 1876.

Sphinx found at
Livingston's Sept '85 on
'round-leaf-long bud
stuff' Reddish green
redder at the sides
and a red line on the
back. Horn red. Head
red. Can be drawn
part way under the
1st segment. Black
marking above the feet.

Hemaris sp.

SATURDAY, JANUARY 29, 1876.

35
from Englewood N.J.
June 7 1896

In young
stage the
tubercles
long and
quite distinct though
concolorous

appearance

FRIDAY, JANUARY 28, 1876.

Sphinx found at Livingston Sept '83 on 'round-leaf-long bud stuff' Reddish green redder at the sides and a reddish on the back. Horn red. Head red. Can be drawn pad way under the 1st segment. Black awaking above the feet.

Hemaris M.



SATURDAY, JANUARY 29, 1876.

A brown larva found Sept 83 on wild cherry at Livingston. It has 4 hands young are ~~[illegible]~~ ~~[illegible]~~ ~~[illegible]~~ arrange of ferruginous. The head is slightly notched and there are 2 black elevated dots on the back segment. It eats ruby and notch.

Endropia lupfochaiscia

SUNDAY, JANUARY 30, 1876.

Green & brown wriggles found on white oak Sept. 13, 1885 – color green broad stripe on back brown. Spins a web among the leaves.

Cat 129
Oneida luminata
Hubn (det Aug 1900)



Copied 5/2/90

MONDAY, JANUARY 31, 1876.

Wednesday Aug 29

Pots down on 'round-leaf-long bud' Livingston Sept. 1885. Head green with 2 brown stripes. Back green on both sides purplish on top. Slight hump on 4th and less one on 7th. Between them back marked with purplish. 2 yellow spots on 7th segment. Rest of body to 10th segment (where is a slight hump) green marked with white. Last segment purplish.

Oedemasia basia

TUESDAY, FEBRUARY 1, 1876.

Small cat on 'long-bed' Lin. Sept. '85. Thicker at 4th seg. On 4th & 5th 2 black spots. Head. Brown variegated with white-brown feet white-brown.
Probably this on maple Jefferson Highlands N.H. July 1895. ate some dogbane blossoms and moulted once (Put it out for a repeated series apparently perfectly normal for Ventridos, emacl, obsene)



WEDNESDAY, FEBRUARY 2, 1876.

ash sphinx on Shawpenack Sept. '95. Light green. Spots on sides of black and yellow, blue-green speckled with black. Head green with 2 black stripes. Tops of feet black (Desc. in other book)

Sphinx kalmiae

THURSDAY, FEBRUARY 3, 1876.

Harapea on Flory-bud
Livingstone Sept. '83.
Green with white lines
and white markings
on sides. Spiracles brick
red.
Same as 17 only
younger.



FRIDAY, FEBRUARY 4, 1876.

Apatura on wild cherry
Sept. 1882. Long with a
few black lines - lower
green. Broad red-purple
stripe on back edged
with white. Head green
with 2 black lines.
(Then he described on other
book)

Or Redford? 4.13.83

B. All green with yellow
S.d. line. Tubercles terminal
(tentacula) black brown distinct
with deep black setae
a few black dots on head
(See 605)

SATURDAY, FEBRUARY 5, 1876.

Green cat. on maple.
Head large green.
Jaws yellow. a yellowish
strip on each side.
Sept '85. Yellow on tail.

Nadata gibbosa
Pupa (Apr '89) Black. of usual
shape. Punctured, wing
cases creased. Cremaster
½ tapering, then straight,
ending in 2 divergent
points that curve upward
(towards dorsum)
(See Sept 22)



SUNDAY, FEBRUARY 6, 1876.

Small green cat. on black
oak. Head rather large.
Brownish lines on each
side and also on
each side of head.

MONDAY, FEBRUARY 7, 1876.

Orgyia at Lexington
Village N.H. June 1876
4 yellow tufts, 5
black pencil on
1, 5 and 11th segment
color grey, head black
yellow hairs etc,
♀ imag. out July 6.
white, black stripe on
top & underneath.
another ♀ out July 7
I put her out and
a ♂ Noctua came.
Brown & white crescent

Orgyia nova



TUESDAY, FEBRUARY 8, 1876.

Cat on leaf July 10 '86
Black white spines (young)

Young ♂ 29 on Jan
as ♂ Nerv. Aug 7.

WEDNESDAY, FEBRUARY 9, 1876.

Cert of Eurypta on leaf July 10. '76 probably = 2 or 3 days older.
Head red. Body ~~[illegible]~~ lined with yellow. Spots yellowish or white. Red lines on each side of body

Eurypta Interrogatrix



THURSDAY, FEBRUARY 10, 1876.

Cert on red raspberry etc Jefferson N.H. Aug 86.
Bluish, on each thorax transverse red stripe with red wart & strong hairs. On dorsal uninterrupted long. white stripe & 1 yellow interrupted longitudinal stripe on each side.
Head black & reddish.
Red beneath.
Eats aphids (June 29, '87)
Head black tinged white reddish with white hairs
Body velvety black
(see Nov 5)

FRIDAY, FEBRUARY 11, 1876.

Myocampa on beech
Jefferson NH. Aug 23, '86
Color purplish. speckled
with white. Bluish
at base of spiracles
which are black.
2 long black spines
on head. Head
light mahogany
color. Spiracles black.
Out Apr 22 1887

Myocampa pellucida



SATURDAY, FEBRUARY 12, 1876.

Beetle Cut 1st Bol.
Black, 2 long white stripes
and long black hairs
Head black.

Cocoon large

SUNDAY, FEBRUARY 13, 1876.

An swamp weed that
has June 4, 1887
black, black nearly
afire, body
shaped transversely
with red. Head black

Mentioned Walton
by Francis description



MONDAY, FEBRUARY 14, 1876.

An hickory June 4, 87
"Cicyrtia" Head
black, 4 black fingers
before & behind
body & brain yellow
brown. On 4, 5 & 11
segments black tufts
with white hairs
with "protuberances" and
[3, 4, 5, 6 segs. brown
tufts mixed with
white, 11, 12 segs. black
tufts. 2 white warts)
(see Nov 2)

Parvagia ~~[illegible]~~ ?
lenoptaca
var basiflava

On Switch bagel
June 5 p. 87. White
1 ♂ & 1 ♀ Tachinid
reared from larvae
Hedge white,
June 5 '76. Head shiny white
with nipples with brown
Eyes brown. Skin & joints 2
patches over head. Body
white, a double channel
showing bet. the joints, and
a yellow transverse diffuse
band on joints 3-11 inc.
contiguous when body con-
tracted. Does not touch but
almost touching middle line
(See Nov 15)





Ogyia on kind-of-beech
June 8, 87. at Shampent
Whitish gray bear
and 4 tufts mixed
with mouldy white
8 smaller tufts & 2 red
warts. Head black,
body whitish, 4 black
pencils and little
" along the sides

*Hop-hornbeam
Parorgyia (see 486)

described by me as possibly
Parorgyia commoranica.

Add Sept 7 1892

THURSDAY, FEBRUARY 17, 1876.

Leilsocampa on black oak at Shompenoc June 8, 87. Very much resembles C. americana but has 10 ⬬-shaped white spots along the back (gray on sides, blue on back edged with black and white. 10 white spots edged with black and between 2 long, red lines edged with black)

C. ~~tibratica~~ distinct ✓



FRIDAY, FEBRUARY 18, 1876.

Lipis a house on unknown shrub.* Semi-transparent blackish above white beneath. Head white with 4 black spots. Shancmak June 8, '87 (*Cornus florida and C. paniculata)

Thyatira fundens Pack. Greatest diam. through wing cases. Abd. egg tapering dark brown, black, showing brownish on the junctures of the parts. Body pubescent. Thorax, wing & leg cases etc finely wrinkled. Cremaster black, 1 mm long, furnished with stiff spiny bristles.

Lu Ott

SATURDAY, FEBRUARY 19, 1876.

White cat, on white hazel "fuzzing" green with a few white hairs from reddish wart & blackish lin among bark. Head under cradle behind branch & leaves.
Cocoon on branch of bark & flattened shape.
One brood a year.

Nola sexmaculata
(See No 121)



SUNDAY, FEBRUARY 20, 1876.

Notodonta m. nobile
from creek at Eaglus
does not moult first
green with 3 long
white & yellow stripes
the middle one, on
4, 5, 6 segs. makes 3rd
3 stripes and comes
together again, once
on 8, 9, 10 times
out 2 meander back
round to the other
stripes. Head green
with 2 red stripes.
Feeds with hazel Aug 88 Brood
Hetrocampa ~~timiata~~
guttivitta

Dermacentor [illegible]

Cent white, head reddish white, thin white hairs. On first seg. 2 red pencils; on 3rd & 10th segs. a red tuft. June '87

Another on maple, Plattsburgh N.Y. Sept 11, 1894. (H) white, cover with angular light-red [illegible] white obscure the cross above after ♀ △ ^ respect in narrow irregular lines; in black bases of antennæ and labrum pale shining; w. 4 mm ±. 3rd segment white with wrinkled irregular transverse white line. Spiracles white, each [See May 22] surrounded and





A larger on currant yellow on each side on back, lettuce greenish & brownish. Don't to black dot on each segment. Hatch [illegible] 2 black dots after June 27

Empitelia - Liparis

WEDNESDAY, FEBRUARY 23, 1876.

A chrysalis suspended by the tail on underside of leaf (Pieris sp?) on lower twig nat.

June 27, '87. Yellow, white on each wing a row of elongated yellow spots and black dots; leg cases marked with black and yellow. Tail black antennae cases spotted with black

Probably Melitaea Phaeton



THURSDAY, FEBRUARY 24, 1876.

A "wriggler" on black oak, Wells C. July 1, 1887 Greenish black, with dried & white, black spined black & orange dots on each segment. Faint yellowish line on the side. Spin a web in the leaves

Caroccia ferriana Clem
per E. H. Fernald

FRIDAY, FEBRUARY 25, 1876.

Eggs laid by ♀ Grapta
umbrosa July 2 is
hatched July 6 ate elm.
Brownish black hairs
head black. 1st moult J. 8
black, black spines & back
[illegible]. 2nd moult July 12
black with 8 spines white
3 moult July 17. Black &
head black spines orange
bluish marks on sides
4th moult July 22. black
speckled with yellowish
spines orange but black
on 1st dorsal segs. Head red.
"5" July 29. Chrysalis July 30
Imago Aug. 6 [ex caterpillar
94 umbrosa 2 interrogationis imagines]

For full description of full grown cat. see [illegible]

SATURDAY, FEBRUARY 26, 1876.

Schizura concinna
[illegible] on
apple July 7, 1887
yellowish with long.
brown stripe.
& black dots. Head
black [illegible].
humped.

Keene Valley N.Y. July 12 1894

SUNDAY, FEBRUARY 27, 1876.

Acetian eating well.
July 12, 1887. Yellow
with thin light
hairs. 2 brood
black long, patches
on back & one on
each side head
black

Spiroura sebata



MONDAY, FEBRUARY 28, 1876.

Splissa on ground near
willows in toilet to
July 16. 1887. Rather
dwarfed. green ob-aque
[illegible]
[illegible] hardened before
with digital pimples
Recd wide white trunk
purplish behind. Near
green, 2 dark lines
(See Nov 13)

~~Splissa gracilis~~
~~[illegible]~~
Splissa luscitiosa Clem.

TUESDAY, FEBRUARY 29, 1876.

Spiraea reflexa of
Gardens July 16 1875
Inflorescence form of pink
flowers on each side
stem light orange

[illegible] = 59 f



WEDNESDAY, MARCH 1, 1876.

Cents, heated from
[illegible] with blush spot
eyes on wild cherry
[illegible] 18 57. Orange colored
white [illegible]
[illegible]
[illegible]

Hyperchiron do

THURSDAY, MARCH 2, 1876.

(about July 20)
Spring or mudbine
whitish strickly mottled
with brown. 4 long.
inter. brown bands
Head marked with
brown. Elevated shiny
brown spot on tail
surrounded by a
black & a broad
brown ring.

Lycaeus abbottii



FRIDAY, MARCH 3, 1876.

July 27, 87 Larva cat. on
lilac "mottled" white, black
brown, black spots here and
aft. from on each side
by 6 fore legs brown and
blue. Moved July 28 stripped
"well" [illegible] long stripes per stripes
[illegible] yellow [illegible]
Moved Aug 2, reddish white
lines. Head black, white [illegible]
Moved Aug 8 reddish black with
white lines, long white hairs
When full grown black with
or more lateral interrupted white
line. Hairs long white.
Head black (See Sept 17)
Saturn interrupta

SATURDAY, MARCH 4, 1876.

Spot cert of bantamut
Sept 1857. between
which 2 longitudinal
yellow stripes.



SUNDAY, MARCH 5, 1876.

Datana in Ariela
Water ash & [illegible]
black with black black,
& longitudinal white
lines & white head
rest red,
* Larva in large nest like
BB 52 but stripe more
distinct and more
yellow. hair less
long.

*Datana Angusii

MONDAY, MARCH 6, 1876.

Little cats hatched from yellow eyed Jefferson Aug. 3 '57 yellow & black hairs brown spots on head. Aug 8, 1 small, yellow, black hair only and dark black. Two dark brown marked with black.

Probably =
Gibsonius aureus



TUESDAY, MARCH 7, 1876.

Litter cats in ash Aug 87
Appearance of Hardiana americana. Green with 2 transverse black stripes on each ring [illegible] which is a row of 6 yellow tubercles with short hairs. Head black with brown yellow stripe. Body green, beneath tubercles on [illegible] = dark segments black.
Aug 6 brown black cats. 4 before 1 Acad yellow. Head + black [illegible]

Spinew fromethia

WEDNESDAY, MARCH 8, 1876.

Yellow bread oyster
wild cherry Aug 1877
yellow with black
dissel band enclosing
2 yellow tufts. Head
yellow. 2 black fences
on 12th wing, 1 black
outlined with brown
on 12th wing. A few
white hairs.
Also on maple etc.

Oxyria lemnatyrum
(a centrosor)

Is it though?
Oxyria definata



THURSDAY, MARCH 9, 1876.

Limacodes angle-thing
Maple & wild cherry, Aug
Aug 87. Green with a
row of points all around
thorax behind longest
middle before; 2 yellow
lines on 2 ridges on
the back joined behind
the middle by two yellow
spots with red center
the lines indentated
between the spots.

Limacodes inclinata ?
Thing fits description

FRIDAY, MARCH 10, 1876.

"Bashful cat." or wild
sheep, spinous between 2
leaves a brown decumbent
a crown. Semi-transpar
greenish or pinkish
white, with or without
pinkish dots at the
tubes, more distinct
towards the breast.
Breast large, shining,
white with nearly
shading inwardly and
partly covered by the
skin of the first ring

Mammatia confusa



SATURDAY, MARCH 11, 1876.

Lacta cut. on white oak
Aug. 9 '87. Head black: body
yellowish with long white
hairs. Tufts on 4th 5th and
last segments, 2 organs warts.
Moult aug 14. Tufts black.

Endemic grown of BB 34
Parnassius clodius
H.S.D. Sept 18, 1893

SUNDAY, MARCH 12, 1876.

Pyrameis cardui Aug 87. Black with white dots, row of yellow spots (not crescents) on hinder, red ring at base of each spine. Spines & head black

Pyrameis atalanta



MONDAY, MARCH 13, 1876.

Wild cherry Aug 87. Larval, clear green with a few white hairs. A dorsal stripe beginning on the 2nd segment of yellow containing on each segment orange red shading less distinct towards the middle of the insect. Head yellow, with orange shading at the top. Cocoon suspended = 8

Larva No 8

TUESDAY, MARCH 14, 1876.

Georgia in wild cherry
Aug 87. Black with
lizard black and
black fawn on body
Black tipt on 11th ear,
on 4th the dark
preceded & followed
by gray hairs. 2
inch white.
Hybernate during - how?



Large female black bear
N. Y. Found June 21 1875.
Wt. of 1.4 weight 150
Pelt & paw also
mounted. Pelt is transparent brown
Bottom well marked
Number .....
but with a stripe
running right down
forward, ending
in a bunch
under neck
Under lip & under
jaw white. no horns
ex any. no shoulder
line on shoulder
line on front
Hatched June 23 & March
Brown marks at rear
next to stripe. Yellow between
Mouth brown reduced to points

Large egg on back of leaf of black birch. J.H.
N.Y. June 21 1895. J 1.4 height .6
Proto of green shell transparent large
formed. Reticulation well marked
markings
but not distinct. Top hexagonal but
varying size irregularly smaller
toward rear, marks side at angles
under C obj. no hairs, the lines seen
at angles on shaded side are rather
fine air pores running through shell
Hatched June 23. H. rounded higher than wide

brown. A pair of large 3 pinnate c-antennae unfold as leave [illegible], 3 pinnate, 3 pinn at base. Other setae from ordinary tentacle but i on 5-10 12 & dorsal plate dark volutish succulent B/S/pale stranded with red at the sides.

Inches than [illegible] grew out into the long tentacle which [illegible] centrally, colored at first, then amber obscured with crimson. Anal fest long divergent. (Out at not)

Another egg on yellow vine, pale green, pronounced glass color, bright. Outstandingly.

TUESDAY, MARCH 14, 1876.

Georgia on wild cherry April '87. Black with lateral black and black pencils on body. Blackbirds on 11th cage. On 4th the dotted preceded & followed by gray hairs. 2 hours dilute.

Hybernation ceasing (now)



WEDNESDAY, MARCH 15, 1876.

Notodonta on maple May '87. Last fall was used a long time. Color brown, yellow spot near tail. Shaped like arrow head pointing forward. Before it a yellowish dot. Then dots. Very. A pair of branching horns. Sides, antennae & head red brown. Scales fuzzy yellow stuck [illegible]

[illegible] interrupted at 7 p.m. [illegible] on [illegible] near the [illegible] Shown inside a leaf [illegible] next to stalk. Yellow between between. Mouth brown reduced to point.

THURSDAY, MARCH 16, 1876.

Excoriation on brisk Ay '87
Color green shaded
with reddish brown
all over the back.
Head green, mottled
shaded with brown
2 little joints on
the first segment
in the thread.
Extends out the second
a little.

Nemoria pistaceata Gn.



FRIDAY, MARCH 17, 1876.

Notodonta on elm. Ay '87
Resembles 10. Green with
a few black hairs, short.
Head with 2 black lines
attenuated white. Purple
on back as follows Strip
from 2nd to 10th seg.
except 8th. On 4th & 6th
9th wider. On 5th, 7th
10 reduced to 2 purple
spots. H' [illegible]
Point at sides below
purple and red spots
the purple when it is
extensive. Interrupted
yellow line on side

=13

SATURDAY, MARCH 18, 1876.

Looper on wild cherry
They spin in common
a hollow home and
"work" the vinegar.
Green with 4 black
longitudinal stripes
on the back, the extreme
one the widest. Head
light orange color

Hydria undulata



SUNDAY, MARCH 19, 1876.

which are in use to separate the g
As they point out the ultimate cl
are physiological. The generic
of such a nature as would scarc
the higher forms. This results
the bacteria. As we proceed fr
of life, the organization becom
we reach organisms which pres
so slight that morphology almos
ters, and entirely fails to differe
If conjugation is absent amo
been present, the cells reproduci

Bimaculata Purple spots on fees many wf & all giving us a dark purple white shaded band covering sides to spiracle and ending white dorsal band 5-10 & running down a streak on 12, also scattering some purple dots all over wf & sides & bases of fees. Sh. band heavily pink streaked; the space 11-13 filled in with purple. Oak

Mr F. Jontel

which are in use to separate the g
As they point out the ultimate cl
are physiological. The generic
of such a nature as would scarc
the higher forms. This results
the bacteria. As we proceed fr
of life, the organization become
we reach organisms which pres
so slight that morphology almos
ters, and entirely fails to differen

If conjugation is absent amo
been present, the cells reproduci
lent parts, a condition of affairs
Weismann for the primitive for
characters acquired by any speci
conditions, strictly inherited. I
such thing as species among th
number of intergrading varieties.
show constant characters, but it
another culture would ever be f
characters.

But owing to the nature of t
most part, on previously prepar
probable that they are degrade

SATURDAY, MARCH 18, 1876.

Larva on wild cherry
They spin in common
a shallow home and
"write" the pupa.
Green with 4 black
longitudinal stripes
on the back, the extreme
one the widest. Head
light orange color

Hydria undulata



SUNDAY, MARCH 19, 1876.

Cat on hay bud day 87
tapering at each end
color light green
with 3 longitudinal
yellow lines. 2 brown
spots on 4, 7, 8 & 10 seg
contiguous to the yellow
yellow lines & other
slight brown markings
Head green with small
black dots irregularly
its shape in profile
owing to the "hump"
especially behind.

MONDAY, MARCH 20, 1876.

Looper on dorsal bind
Brown with black
dots on each wing
Black dorsal line with
brown centre from bend
to 3rd segment. Red dot
spot on each side
5th seg. On top of 4th
slots 2 with dots
with black between
2 elevated horn points
on 11th. Head brown
slightly mottled, as
is the whole insect



TUESDAY, MARCH 21, 1876.

Selana on wild plum!
from Overlook Water
Bray 87. Black with
8 longitudinal yellow
stripes. Head & tail
dark red and
bluish to black.
Spot on 1st segment
black.
Similar, head, spot on 1st
segment same, hair light
orange red. Body
with 4 longitudinal
yellow stripes on each
side. Few white hairs
3 interrupted yellow lines beneath
pattern ~~[illegible]~~
(see Det 31)

WEDNESDAY, MARCH 22, 1876.

Grapta comma on elm
leaf, Aug. '87.
Yellowish white with
dentated markings
and in form of leaf
of a dark color, with
white spots
with black blotch. Recent
white. Effie on it
black.

(Also) Grapta comma
(white) Feb. 13, 1888 Degree



Grapta comma in elm
leaf
8/1/90

THURSDAY, MARCH 23, 1876.

Dentated, tail
tuft, body
hairy "
Aug 26, 1887. Harpy ca
color brown with a
pointed head, elevat
eleventh with segment
and a single tail.
also on 'long-leaf'
(Represents or alnus)
Dan Darrow (June 1 1888)
one tail, thorax single
dark brown notched
white & green or purplish & ferruginous like Limen
extra colors. White on
edges & along back, in
middle & side upward
towards green or ferruginous projection

viburnum acerifolium
dentatum

Grapta comma

FRIDAY, MARCH 24, 1876.

"Marsh cats" on yellow flowering asarum on lower ruts. Aug 26. '77. Opening a bird's crop and finding: Brown yellow, black band c first and last few segments. Black bar in back c down of black spots on each side. Head notched (hybernate in a web) = 43 (?) = 33 (?)

Miletarian plantons (?)



SATURDAY, MARCH 25, 1876.

Great larvae on oak Aug 26. '87. Greenish brown with several brownish wrinkly bumps. First segments smaller, last four legs protruding

Eugonia almariata

SUNDAY, MARCH 26, 1876.

Meanwhile on ray
weed Aug 87. Broke a
brown dorsal stripe
& yellow stripe
on both sides below
2 yellow stripes ventral
& black stripe.
Head reddish brown
with whitish. Beak
brown bifurcation on
1st ray & black.



MONDAY, MARCH 27, 1876.

On rock pile Aug 87
yellow longitudinal
line, between two
blue with black
lines. Head and
hump on both ray.
orange yellow. Last
feet not used.
Also on black and
white oak. and probably
the latter if they moved
so much albifrons.
(See 88 78)

Etheostoma albifrons

TUESDAY, MARCH 28, 1876.

Lost on creek-border
bush Sept 87. Body
and head black.
Little short hair
on side brown
on back white
after 4th segment
On 6th, 6th & 7th segs
a short black
tuft the spine was
larger than the
other spines. On ventral
from middle between
last pair of legs all
black. All hair
mixed with white
hairs giving mouldy appearance
(See July 12)



WEDNESDAY, MARCH 29, 1876.

Lost on geranium
Sept 87. light green
with a whitish dorsal
line. 1, 3, 4 & 11th segs
marked with darker
green and the head
shaded with whitish
the segment bounded
refs. Head greenish
with lighter shading

Mamestra adjuncta

already described

THURSDAY, MARCH 30, 1876.

Larva flies at end of day from Crow nests! Aug. 1887.
Green with dark ventral longitudinal yellow lines.
Head green and not notched.
Lateral yellow line not reaching tail.
Caudal prolegs green with longitudinal white lines. Anal and leg segments studded with white.

Celerio pulchraria



FRIDAY, MARCH 31, 1876.

Mamestra? One yellow and Sept '87. Color black a dorsal red stripe, narrow. On sides a broad yellow line marked with black below a red line. Black lumps on 10th segment separating the red line to a red spot on 11th segment. Head black dispersed white marks. Black on sides longitudinally striped with white very finely.

SATURDAY, APRIL 1, 1876.

Andromeda ligustrina
Leaves on stem
lower entire plain
but long slender
tail forward very
black with &
some yellow are
white tufts over
2nd in a dense head
spot on left adjacent
and tail black
[illegible]
(See BB III)
Datana major



SUNDAY, APRIL 2, 1876.

Footstalk on willow
green or white lateral
yellowish. Back
entirely brown with
white blossom
[illegible]. Footstalk
black on 3rd segment
White blossom more
distinct than brown
and edged with
white. Harpyia multipunctata
var Hemerocampa double line
stripe on back edged
white yellow white or
brown projection in middle
lateral line wanting
var = Harpyia occidentalis

## MONDAY, APRIL 3, 1876.

Sphinx on willow
Sept 27. Green
with white [illegible]
lines [illegible] white [illegible]
[illegible] sides and
[illegible] on head
to [illegible].
Slight [illegible]
[illegible] spots in 2 rows
[illegible] with 2 white
lines. Horn blue.

Smerinthus geminatus

## TUESDAY, APRIL 4, 1876.

Datana on sumach
Sept 27. Black with
line yellow and
broad. Head, [illegible]
in 1st segment and
tail black. Very
little hair.

Datana perspicua

WEDNESDAY, APRIL 5, 1876.

Splung eating apple
stunned weed Sept '87
Head, of, antes dry.
brown, tail and legs
ochre yellow and shiny
and dirty the latter shaded
with yellow. Body black
above yellow beneath
an interrupted yellow
dorsal line, interrupted
lateral lines. Back
dotted & sprinkled
with yellow. Beneath
lined with black in
two directions.
Veilephila



THURSDAY, APRIL 6, 1876.

Cast on Lilac Sept '87.
Much lengthened especially
the segment. The last few
appear depressed it.
A few white hairs to
which the shed hairs
stick and project in
a string from the back.
Back brown, much
streaked with white
at the sides and
whitish brown at the
neck.
Makes a hole in wood
for cocoon.
Harrissimenna auxiliaria

FRIDAY, APRIL 7, 1876.

Part green flanged loafer on witch hazel Sept 87. Color brown. On 2, 3, 6, 7 and 8 segments 2 green flanges. On 4 and 5th segs. 2 brown flanges. On 11th 4 brown points. Head brown very slightly notched.



SATURDAY, APRIL 8, 1876.

Heterocampa estera Clem Sept 87. Green with 2 white lines in the back approaching each other on 2, 3 and 10th segments also a dark or slate of the 3rd segment. On 4th & 10th 2 and 3 waste the dorsal not as well. Slight lateral line. Head green with 2 white edged with brown lines. Last feet not used. On fem black hair. (See 206 A)

Searching to delineate (206 A)

SUNDAY, APRIL 9, 1876.

Sphinx on ash Sept 87
Yellow green above
slightly blue green
below. Slanting
lines on sides of
white edged above
with green. Hind
green with 2 white
stripes. Horn green
slightly reddish.
Tail speckled with
black.

Sphinx undulosa?

It is per description of C H Fernald.



MONDAY, APRIL 10, 1876.

Flanged loopers on birch
willow maple etc. Sept 87
Color dead-leaf brown
On 4, 5, 6, 7, 8 segments
a pair of large pointed
projections or "flanges"
On 2, 3 slightler ones
2 points on top of 11th
(I am other book)

Endropia ornantaria?

TUESDAY, APRIL 11, 1876.

Elytra on 3 rows
Sep. 87. Bluish green
with yellow spots
in the sides and
on top of first two or three last
segments. On 3 &
4th segment
bluish with reddish
lines.
Prominent. Body
spotted with black
Sep. 88 [illegible] black
Except on 4 & 11th. The last
is never or very rarely
by orange or black
acid an orange (yellow
when young) and later



WEDNESDAY, APRIL 12, 1876.

Same as 91? but youngest?
Brownish but yellow
on 2, 3, 4, 6, 7, 8, 9 & last
segments. Head black
2 tufts like 91.

Same as 91
band of black across
thorax. Lines &
subdivided black bars of
mottling less distinct anteri-
ly. Black of stone sides
Faint white lines.
Much subject to variation
(See Ref 1)
Vestigium albosignum

THURSDAY, APRIL 13, 1876.

On burweed sept 87
Black & red bits
with their white
hairs along sides
a row of yellow crescent
and 2 rows of sub-
dorsal faint yellow
spots

Is it the rare
Acerophora ophiomitis
described ~ 415?

94 Lateral & hand lower white &
space v–vi inclusive and ci pale
otherwise brown water black
trunk less on thorax dorsum
[illegible] with a central [illegible]
other testaceous & pale others



FRIDAY, APRIL 14, 1876.

On blackberry sept 87.
General resemblance to
gracilis. Black & red
black. Thin white hairs
growing from warts, on
fat 3 & last 3 segments
brownish yellow. On
anal skin brownish
Another from a boy before from Highland
N.H. June 29 1875. HB along blade
on wooden [illegible] 2. Just Red velvety
black a broad diffused faint
reddish yellow stripe, including
the tawny v & vi. Stimulus of
brunnea a broad black dorsal
rest much pale hair about bands
nearly white but tawny red
i–ii on 3–6, 12. Spiracle white

SATURDAY, APRIL 15, 1876.

Like unicorn on back
color brown with green
neck. Dark brown
stripe down back white
V green tent and
on 3, 4, 5, 6, 7 legs. large
white spots. Head
with black lines
tufted fringe on side
of neck.

also on middle & white
breast
Hump on side 2 fronted,
clump on 8, double on
on 11 [illegible] on 7 (See 0827)
(This description is nearly
Coelocerus biguttatus?



SUNDAY, APRIL 16, 1876.

"Roots"

Cattocala on linden
Wista June 5 1888
Ash gray with small
longitudinal rows of
black points. Fine white
elevation on 11th segment
Beneath yellowish
green. Head gray
with black marks
& black spots on collar
A row of little white
"roots" along each side
below, where the colors
meet.

Cattocala cerogama

1883

MONDAY, APRIL 17, 1876.

On elm June 1888
Light green, lumped
on 4th segment
yellow lateral and
dorsal lines end
and between the
latter pointed upward
where the larvae comes
out to pupate
emerges yellow
Out July 18, 1888

Apropilia supernivalis



TUESDAY, APRIL 18, 1876.

Euparthenia scribonia
Eggs laid June 26, 1888
Round green and smooth
(Eggs dark)

WEDNESDAY, APRIL 19, 1876.

On black oak July 28, 1888
light green, darker
lateral stripe. Small
Head black. Moult came
head yellow. Also dorsal
stripe. Moult same. Head e
[illegible] on 18th day. Light orange
lateral stripe. Reddish in
front & behind. Black
spots on last segment.
Had pale [illegible] used
Moult color light yellow
black band at side. a
lateral and dorsal black
line. tending to broaden
last segment marked
with 5 between black stripes

THURSDAY, APRIL 20, 1876.

Head and lump light
orange.
Moult came. Was head
and lump traces of two
more lateral black lines
below & above the black
space. These are slight
in previous moult. Black
spot on 4, 5th segs below behind
hind. legs in line. Also
on other segments fainter
than last. Also black on
side each side of dorsal
line. Moult
Same to mature larva
See BB 76
Edema

Egg of Euplectella burispina
nearly spherical, flattened
at base, mounted with about
20 longitudinal ribs and
numerous transverse ridges
the former somewhat irregular
indicating by a depression on the
color white with a
circle around the center and
a spot on top of pink
brown, these marks more
or less confluent. Aug. 1884
Length about .5 mm.
Larva white with black
spots forming stripes
across a brown. Head leg
and cervical plate black
(Ernest Sparks (see Oct 27))





They eat their egg shells.
It looks like a dropper
having only 1 or 2 legs. Hatched
Aug. 11. Remain stretched out
on the back of the leaf.
Moult Aug. 16. Semitransparent
whitish with black dots
finer as before. Head with
mouth parts black
Moults Aug. 20 Same.
25 Whitish with black
lateral band, with traces of
a middle subdorsal on first 3 segs
black inferior dots.
Moult Sept. 1 Same. Lateral
stripes black above & subdorsal
white & dorsal faint yellow
Head first. Dorsal spots more like
darker semitransparent, quarter

SUNDAY, APRIL 23, 1876.

Egg of Tarache erostrionides
Colitaca. Flat at bottom
marked by 14 longitudinal
ribs, alternate one
slightly projecting at top
the others not quite
reaching, and many
transverse ridges only
slightly elevated.
Color dirty pea green
width .25 inch length .35 inch
Aug. 1888.

Larva furnished with
16 legs. Dull a yellowish
green, elevated round
each segment, three
brownish. Head, cervical



MONDAY, APRIL 24, 1876.

shield and fore legs black.
Hatched Aug 11.

Sept 26
1883

TUESDAY, APRIL 25, 1876.

Egg of Ungeromia crocatana
Robertson exhibited
flattened above & below
Color green becoming
red. Length about .6 in.
Aug 1884
Hyphantria. whitish green
with 2 dull brown black
stripes. Head & anus
shield pale orange. Ins.
also black stripe beneath
2 moths whitish green
with 2 subhead &
and one stripe below
reddish brown Head
concolorous with body
Ins & Pale whitish

WEDNESDAY, APRIL 26, 1876.

green with two lateral
indistinct brown lines contrasting
with the dorsal, and
a second beneath.
(Really same as before)
Aphoult Larva. Back
dark whitish green,
beneath paler green
stripes reddish brown
also one on each side of
dorsal. A faint darker
green dorsal line
Ins & Back pale
with [illegible]
below [illegible]
in [illegible] Head concolorous
Hibernate.

THURSDAY, APRIL 27, 1876.

about to "cover" in grass
Aug 1887 Black shaded
with reddish at sides
being a fair taper
legs and tail
and dorsal showing
only on last 3 or 4
segments. Head black
2 fine lines white,
tufts of black rather
white hairs from wart
8 to a side
Pupa (on covering) cylindrical
tapering abruptly posterior
sounds closely granulated
wing cases finely crenulated
cremaster short, conical,

FRIDAY, APRIL 28, 1876.

of the same slope (?) as
the last abd. seg. color
dark reddish brown,
not shiny. Cocoon bright
tough, composed of silk
into which are interwoven
bits of grass stems etc.

Apatela noctua Grote

Described by Thaxter

Another Jefferson Highlands, N.H.
July 10 1895 Also about to
"cocoon" in road. "Lateral line"
substigmatal, fine hair mixed
in the tufts from i and ii (section)

SATURDAY, APRIL 29, 1876.

Oviposition Aug 1888
Light green with
2 subdorsal yellowish
stripes and trace of
lateral stripe of pale
on scutellum
Rests flat on leaf
a bit in a bed
interstices. Body
taken each way from
middle.

Elaphrentrilinator

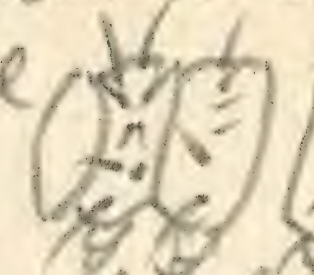
Egg buff & dried eggs and
[illegible] of [illegible]

104 A
2 cotyledons transparent and egg on back 1 Oct.
Trimerodes Jefferson Trip. June 18 1876
Flattened leaf Upon leaf & diam
.35 high. Slimy (primary) plus transp
and hyaline finely (½ inch) Reticulation minute but
exactly hyaline edged, distinct but
faint. Pentagonal - hexagonal, rounded or
Minute pits and many reparian. Corrected on
micropyle and many Minute amoeba effect
Pattern Hatched June 22 Hd pale yellow, tinged
Body pearly, no crenates, pattern, and fewer spines
normal, no hood. Setae fine, pale, stiff (Sch. Vol. 3)

104 A

2 colorless transparent eggs on back of Pop. tremuloides Jefferson Highlands June 18 1895

Flattened, less than hemispherical .8 diam .35 high, shining. Grain of leaf shows through but magnified (½ inch) reticulation moderately broad, double edged & distinct but flat, pentagonal - hexagonal, rounded or elongate not very regular, rounded at micropyle but not much smaller, effect flattened Hatched June 22 Hd pale yellowish tinged red, precisely, no cracks, flattened, and feet spread normal, as usual. Setae fine, pale, stiff (and Shld .3)

slightly curved at tip, normal in stig first (no
vi seen) 3 on leg plate, the middle one long
the others short. Hd cordate, mouth horn, eye
black. Died active perfectly normal  first
pale; 2 off c-th, 3-4 with i & ii all present
Moltfree 29 Hd. 6 Pale green, bd a little yellowish
brown, a median bd line. Later more distinct
and fat spinning. Body cylindrical, viscera
folded.

SATURDAY, APRIL 29, 1876.

Oct. 30 1888

Light green with
2 subdorsal yellowish
stripes and trace of
lateral line of fish
in scissors

Rests head on table
& bent [illegible] head
attended to. Body
tapers each way from
middle.

Shaffner Trilinear

Ag. bagged & dried eggs are
[illegible] of 28. [illegible]



SUNDAY, APRIL 30, 1876.

were like the third of a
sphere, flat below, outline
from above circular. Color
pale yellowish green very
minutely & closely punctured
Diameter about 9 mm. Mouth
Papa Pitting black, flattened
on the ventral side, dorsum
crenulated. Finely punctured
Segs. closely appressed, leaving
no room for lateral motion
Cremaster rose, anal seg.
evenly rounded. Papa tail
Length 10 mm. Diam 4.5 mm
[illegible] cases crushed.

Appd

91

(see Dec 3.)

MONDAY, MAY 1, 1876.

Notodonta on white oak
Aug 1877. Larva, pale
1 brownish-yellow. Head
dumpy on 4th. line from
head to lump and last
seg. more distinctly brown,
last feet [illegible] not used in walking
(Egg globular & semi-transl.
shell in uniform green)
2 Imago yellowish. Wing
on 4½ & little brownish
Head ornamented with 2
brown tranels. Semi-
obsolete dusky band
fixed slightly outwards
on top. Last feet elevated
3 most [illegible]

also on white birch common
[illegible]

TUESDAY, MAY 2, 1876.

Top of 10, 11, 12 dark green
[illegible] with brown. Hump on
4 and 14. Black shades on
sides on 4, 6 and on back
on 7, 8, 9. Head brown with
2 confluent rusted white
spots in front. Mark post
and middle, no side also
white spots. White spot on
side of body on 10 seen.
4 Imago same: [illegible] extending
over [illegible] leaving brown space
oval, not on 12 [illegible] shades on sides
3, 4, 5 & 6 and on top of 7. Semi-
white spots on sides of 10.
5 Postmort same [See Oct 22]

Jamaica Lignicolor

WEDNESDAY, MAY 3, 1876.

Eclipse on oak Aug 1888
white lateral projection
covered with thin shaggy
color brownish marked
with whitish in three
spots on the back and
a dorsal black line
whitish on sides and beneath,
head brown marked
white whitish at the eyes

THURSDAY, MAY 4, 1876.

167 = P87

FRIDAY, MAY 5, 1876.

Egg on clover Aug. 1888
Round, flattened above
and below and smooth
Color reddish, more on above
Diameter about .7 mm
Hatched larva yellowish
striated irregularly,
dorsally with red
on the sides each marked
on 10, 11 and all on and 1 to
head yellowish marked and
black hairs thin more
laterally on 5, 6 & 7. Last foot
not used. Hatched Aug 17. 23.5 mm
Moult Aug 21

Ill. reared in terrarium
hatched brownish less

SATURDAY, MAY 6, 1876.

On 4th segment two brown
elevated spots. Head
orange, last foot brown
five brown spots on 4th seg.
25 Pupa all at surface
color above [illegible]
lateral and under dorsal
[illegible] stripe. Here he [illegible]
into a black dorsal line
[illegible] 10th seg.
[illegible] with black
[illegible] of black spots on base
of 5th. Black spots on 6th
and one on 10th. Last two black
dorsal stripes. Last leg marked
black laterally 3 Moult Aug 2
same, dorsal stripe less distinct
yellow. Moult Aug 31 (see Oct 20)

SUNDAY, MAY 7, 1876.

Young larva on white oaks Aug 1888 about 5 mm long. Tail fact and side color yellow with lateral & dorsal black stripes. Head cervical shield abdominal legs and last segment shiny black color black yellow with 4 lateral broad pale yellow stripes. Observed as above, mouth same. Three stripes beneath mouth same: stripe broad white. Head anical shield and anal plate black.

MONDAY, MAY 8, 1876.

Mouth same: stripe not as wide but still as wide as the intervening space. Cervical shield and legs dull reddish yellow. Head and anal plate black.

Datana contracta

Some specimen have stripes narrower than intervening space or even the upper one partly wanting. Color pale yellow to almost white

TUESDAY, MAY 9, 1876.

Datana
Antodonta n. sp. Lucina
Aug 1881. Young larva
yellowish white
with two dorsal
and around thoracic
segments, also two subdorsal
brown lines. Head and
anal shield black.
Last feet not used,
marked with black
most some long. Reddish
brown white & lateral
yellowish lines on
each side, narrower
than the intervening
spaces. Yellow line
below. Knee crimson



anal plates
black. Red crow dorsal
around thoracic segments
and laterally on 6, 7 & 9, 10.
Moult Aug 23. Same
but even uniform reddish
Moult Aug 31. Black:
stripe yellow, fine.
Head, cervical shield
anal plates black
Rather long white hair
Ave 6 ¾ to 1 in (14.5 mm) Black shining
filiform head. Spots & anal with
fuscous & body black
flattened & 3 pronotal narrow
pale yellow line, not confluent
first. Base of legs & spots on legs
yellowish red crow white
darker abundant. (See 08 205)

Datana Angusii

vd 7/26/90 110

THURSDAY, MAY 11, 1876.

"Double Tory" dogwood
Young Lana or maple
Aug 1884. Redbirds marked white hazel
white green on 1, 2, 3 segment birch
in a patch, a line down hickory
back and spot on 10th
Head red. Ch 1, 4, 5, 6, 7, 8
9, 11, 12 legs a pair of black
bars, three on 1st three
pronged, the other with
a knot in centre and
spline at the end, each
arising from a black
oblong spot. Legs flesh
spot pair not used
vd June 22 1890 on birds.
Hol. deposited at Peabody



FRIDAY, MAY 12, 1876.

dark wine red. Body
cylindrical, smooth and
shining but somewhat
contracted, feet normal
the anal pair elevated
rather long. The claspers
apparently aborted. Caudal
spot large bearing a
pair of horns which contain
three Dharmbeed, unused
with a shorter spine
near the base all dark
blackish brown. On joints
5-10, 12 & 13 from elevated
shiny bases a pair of
similar but slender
horns not branched (Nov 2)

SATURDAY, MAY 13, 1876.

Pupa [illegible] Aug 1884.
Egg white with a depression on top. Width 7 mm, height .5 mm. [illegible] 40 on one side of leaf]?

Moving larva black with stripe broads and white mouth, then the intervening space dorsal. Head & cervical shield orange. Thoracic feet, onto 8th of abdominal legs, a anal plate black! Few colour hairs.

Before last moult Body black or reddish black, stripe

SUNDAY, MAY 14, 1876.

[illegible] brown, white (in one specimen bright yellow) Head, cervical shield, abdominal legs 220 pots on 1, 2, 3, 4, 5, 10, 11 segs beneath & anal plate dark orange red. Tho. feet black. Very little hair. Thoracic or pygo pinkish, intersegmental [illegible] (or yellow) lines beneath. Lateral [illegible] Mature larva Body black. stripe broken into a series of irregularly square white spots, then three upper stripe on each side having the spots 2 on each segment alternates more the reduce the lower stripe [illegible]

MONDAY, MAY 15, 1876.

one spot below the spiracle on each segment and another longer one between the rings, these being mostly alternate with the spots of the colour stripes. Head, cervical shield, anal plates all dark (red & black) with dark bands and spots on 4, 10, 11 segments dark orange red. Stigmatal region represented by a few white dots. Also white dorsal. Lycium foot plant. Andromeda ligustrina

Saturnia major ♀





TUESDAY, MAY 16, 1876.

On Poplar Aug '88 Shaper bites BB104, green with 2 subdorsal yellow lines on 2, 3, 6, 7, 8, 9, 10, 11, 12 a reddish brown patch between the lines with a yellow. Between on 1 & 5 segs. 2 brown dots = black marks on head

= 104

Sphinx tiliae

113

WEDNESDAY, MAY 17, 1876.

[illegible] yellow [illegible]
bright [illegible] 2
transverse rows of
[illegible] spots (unpaired) [illegible]
ie 1 above ii, i below i, below iii
[illegible] be seen
of 2 appropriate tubercle
on. a yellow stripe (seta ia)
[illegible] on top. On 4, 8
& 11 are a transverse
curved yellow band
a brown narrowly
[illegible] before extending
iii-iii nearly just
half way down the sides
[illegible] marked out
in a line or square
on a yellow cut post edge of leg
[illegible] has two dark
brown spots before each
curved band

Pupa. tail. abd. [illegible].

9,9,12

Setae [illegible] VII 2, 3 have. The [illegible] yellow spots [illegible] on 2 [illegible] smaller setae

i — VI [illegible] setae [illegible]

Raphia? Little green whacker on [illegible] ½
[illegible] J.H. [illegible] June 20 '95
green, tubercle large, whitish, 2 ant. mid
feet greatly enlarged. Hd bilobed, △
high, pointed, green mouth brown, eye black.
W. [illegible] Setae short, perfect,
normal single, vi obscure, leg plate green
wide few setae
later on 5, 4 a
connects ii on
[illegible]
apparently stage II
curved whitish trait
the dorsum, post.
Molt June 24 Hd 1.5 Spots large, [illegible]

113A
but 5 or 6 on leg plate. 2 ant feet small
Spot with single seta, none additional
~~Like 113 just moulted except on [illegible] in 3~~
Moult July 7 Hd. 3.2 like 113

113

Setae single No 2d hair. The additional yellow spots are on spots and 2 feet smaller & [illegible]

7,9,12

a brown

Pupa. tail. Abd. acep.

113A

yellow, not green a pair of 2 tubercles [illegible] & elevated on 3 Curved bands (2) more distinct. Colors green & yellow, no other. Setae perfectly single 2 ant pair of feet small. Also a curved yellow band on 12. There is a yellow spot above the feet on III & a few spots on ant annulet of 3-4 but they bear no setae. There are no setae besides primary & subprimary Normal [illegible] ia on 3 enlarged

Thursday, May 18, 1876.

contracted (not compressed from either shrunken). Abd as wide as any part [behind hip cases] Proper rounded obtusely at both ends about alike [my notation at [illegible] it] cylindrical. Body shallowly [Ant. portion [illegible]] granulated, but seems smooth without any [illegible] wrinkled coarsely. Color dark brown red. Cremaster conical projection tipped with a point. Length 13 mm. Brown tough & rather thick very. (See Aug 24)

with curved

[illegible] ( ) to cremaster.

Raphia frater

moult June 29 Hd 2.2 No 2' hair ant 5 or 6 on leg plate. 2 ant feet small short with single seta, none additional ~~like 113 but mixed except on feet on 3~~ moult July 7 Hd. 3.2 like 113

Antetail on white oak
Aug 1888. Green with
antal strip of reddish
brown edged with
yellow. Small black
on at exponent, brown,
yellow at base.
Flantary lateral yellow
line and row of red
plates edged with yellow
before opercles.
Head green with two
side bands meeting on
top of mottled brownish
with yellow edge outward
having a tooth internally
Tails green with

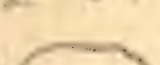


reddish stripes, long,
mouth same. tails quite

Egg on white oak Seaforth
L 2 9 Jul 18 1896
Flattened, less than
hemispherical, lustrous yellow
not shiny, translucent but
greenish, fixed glass like
D 1.4 height .6 mm. Reticulate
circulars, 6-angled meshes,
regular obscure the angle
rounded & distinct pores.
Albumen & hatch fig 21
evidently = oak fish tail
F. matheria

(See back, Ans Nat v18 p.1044)

Egg on white oak Beetport
L. S. Aug 18 1896



Flattened, less than hemispherical, texture yet not shiny, translucent but greenish, ground glass like
D 1.4 height .6 mm. Detumbat: convolutions 6-angled, narrow, regular, obscure, the angles notched & distinct pores.
Colored & hatch Aug 21
Evidently = oak fruit tent
H. maritima

2 skippers
and 2 little
Halisidota tessa
on black oak

FRIDAY, MAY 19, 1876.

Dredged in White oak
Aug 1888. Green crest
dark slaty & reddish
brown edged with
yellow. Double lunule
dark against brown,
yellow at base.
Flattory dated yellow
line and row of red
shots edged with yellow
before opercles.
Head green with two
side bands meeting on
top & mottled brownish
with yellow edge outward
having a tooth internally
Tails green white

SATURDAY, MAY 20, 1876.

reddish stripe, long,
Mouth same. Tails quite
short, hardly more than
long hind feet. The
dorsal stripe is not of even
width being slightly ex-
panded on nearly every
segment, contracting again
between them. Iguana seem
to eat his little and twist
off tail. (Iguana gitters as walked
all west and to dies)

Heterocampa manteca
(See back, Ann Nat v18 p1044)

SUNDAY, MAY 21, 1876.

Yarra on black oaks and chestnuts Aug 31, 1888. York lake Indotea color green with white tipped blooms scarlet anthers narrow yellow lines, anther platform white yellow shader. Head crosstie green.

=25

41 On a woman's dress Jefferson Highlands N.H. Aug 7 1895 Hd 3 ± Same, a few red hairs from whole length especially 6 & 7. No black marks a lady expert on joint 2. A dead lane found on yellowish

(41 cont)

MONDAY, MAY 22, 1876.

preceded by an oblique black patch strongly suggesting a hatched calcium egg! Quart large iv alcest hair rather bristly, not long not obscuring body, but quite abundant, white from (2) on a light red pencil; from upper half of 5 and 12 a red tint. Single dorsal roots white. A few large white hairs from 13 a faint d. and lateral dusky stripe not known in fresh specimens but more prominent than other parts i, ii on 12 form a trapezoid

Shed Hd black except sutures. Pencil 3 black, two 5 red, 12 red & black side, of hind leg (blown)

No 2 Pierce, Jackson May 6 1895 — Catalpa 11 days

TUESDAY, MAY 23, 1876.

Dor Poplar Mistletoe Sept 88
Shrubbery at mag. Cust
fact small. Sides of
trunk on 5 and 6 segs
color dark purple, w
white lines each side
of coal stripe, and
oblique lines, w white
bordered on each segment
white on lateral lines
trunks shaded not black
legs with segs shaded
with a cylindrical bar
Head gray with many
dark spots, w white
line on each side
Notodonta strigula



12/18/90

WEDNESDAY, MAY 24, 1876. 5/22/90

Pacetinumstatinum
Apatela? on Sorbus Sept 88
Light yellowish green, a
purple brown dorsal stripe
edged with reddish yellow
interrupted on 5th seg. and
traveling on 7, 8, 9 to
envelop a reddish green
patch. Cervical shield
green, with 2 black lines
Head pale light, darker on
top & lined sides. Body
with low, thin black hairs
Spiracles black
On blueberry & ~~[illegible]~~ vaccinum st
Becomes red on preparing to
pupate. In cocoon of thread etc
Apatela tritona Hübner

THURSDAY, MAY 25, 1876.

Parorgyia? or Liriy left
Body & head black.
Thin yellowish brown
hairs from waist, trans
rows of coda seg. 1 & 2
seg 2, two black fences
[illegible] 4, & 11, one
black tuft, composed
of two tufts, close together

* should be seg 1 = joint 2

Chandler Jordens [illegible]
Sale Ballarat 23 July 21 1876
not in a house but hanging
to side and spring room.
Hd yellow & black band
over eyes & antennae across
cts after 1 △, antennae ½ △ also
black bro 1.5 ± mm. Body
whitish, bro all grey & white
a central d. stripe, a rows
sef & under lateral, all
faint. Hair from waist short
iii, long leaves found of iii and
s-v. Dont see iv. Spun leaves together
Shed July 27 Hd 2.5 ± black, a
yellow band across △ trisected
by the black sutures, Body all
pale whitish with long white
hairs from waist. In house
1 & 2 leaves webbed together.
Shed Aug 1 Hd 2.5 ± same (Sh hd
1.9 mm) Shed Aug 7 Hd 3.5 (Sh hd 2.5)

Chrysodeixis dividens [illegible]

Salt Bellport L.I. July 21 1896

Not in a house but trying to hide and spinning down. Hd yellow & black band over eyes & across at apex of ⊿, antennae of ♂ also black. W. 1.5± mm. Body whitish, broadly gray & with a central d. stripe, a narrow sub & inside lateral, all faint. Hair from vert. short i vii, long here & front of iii and s-v. Don't see iv. Spun leaves together

Shed July 27 Hd 2.5± black, a yellow band across ⊿ trisected by the black sutures. Body all pale whitish with long whitish hairs from vert. In house in 2 leaves webbed together.

Shed Aug 1 Hd 2.5± same (Sh hd 1.9 mm) Shed (Aug 7) Hd 3.5 (Sh hd 2.5)

same Shed day 14 4.5 (Yg. 3.5) same, the white body has paint during set line below it.

| | | | calc. |
|---|---|---|---|
| 1.5 | | III | .63 |
| 1.9 | | IV | .83 |
| 2.5 | | V | 1.10 |
| 3.5 | 3 | VI | 1.45 |
| 4.5 | 4.5 | VII | 1.90 |
| | | | 2.50 |
| | | | 3.42 |
| | | | 4.50 |

THURSDAY, MAY 25, 1876.

Paroxysmal on Friday Sept 22
Body & head black.
Skin yellowish brown
lines from waist, from
armpit to coda ang. Dr
ang 2d, two black fences
[illegible] 4, & 11, one
black knot composed
of two knots, close together

should be Ang 1 = joint 2



FRIDAY, MAY 26, 1876.

Concealed in oak leaves
Sept 1888. Body white
semitransparent, the
pedicelations & blind visible
Head black and shiny
white on top and sides
and rows of white
light yellow in a transverse
band above the mouth
divided into three spots
by two narrow black lines
following the joints of
the head part. The
two outward spots are
triangular, the centre
one circular upwardly.
Body covered [illegible] them

SATURDAY, MAY 27, 1876.

long white hairs
10 mm. or more, arising
in little tufts from
the apex. Form black
hairs from the fines
[illegible] spinkly formed

Another on Quercus macrocarpa
Plattsburgh, N.Y. Aug. 1894.
Acrocytia? in lieu of white
silk made partly of aque
ous flocculent white silk,
slightly curving over apex
of leaf on each side. Hd
rounded, olive light yellow
ish mottled drk black
W. 3 mm. (see Aug 30)

SUNDAY, MAY 28, 1876.

Cecidoeiaspis urnicornis on
wild cherry, Sept. 1888.
Horn double footed on stem
and short on one side
Body reddish brown
mottled blackish on the
back and fair hairs
line. Seen on 2 & 3rd
eg. green, yellow above
On 4 & 10 a yellow V
pointed forward. Head
nearly uniform brown.

Copied 11/27/90

MONDAY, MAY 29, 1876.

Fruiting on wild hemp
over the BB 12. Body with
& longitudinal slight
elevation or ridge sd & superior the
the upper a little darker
green than the ground
color, which surround
Body terminating in a
short point, color pale
whitish green.

Packardia geminata
(auct. Packard)
28 thus = 256. = BB 12 dark?



TUESDAY, MAY 30, 1876.

Eggs supposed to be of Arctia
decta, ~~the~~ antiopa. 11/29/90
From Pasadena, Pale whitish
yellow; subconical, the
apex rounded, the base
rounded flattened and
the broadest part. Quite
smooth so far as I could
see and shiny.

E. imperialis. Pupa.
black, the body coarsely
punctured, bet. segs. finely
creased and dark brown
the posterior edges of the segs
more or less furnished with
pointed projection. Wing
cases with rows of points
following the principal
veins. Back of thorax &
large wrinkled elevation
cremaster a large thick
spine, wrinkled below,
coarsely granulated above
5mm long 2mm across 1.5mm
thick only very little tapering
ending in 2 points at the
outer edges, the depression
bet them but slight





Pupa Satanas drexelii
Similar to D. minutus
but larger. Black
wing cases wrinkled
body segments punctured
cremaster two, very
short & blunt, with each
3 spines (called the cremas
by Mr. Bentenmüller)
the outer ones sometimes
very short, in a line
in the lateral diameter
of the body.
(In D. minutus the
cremasters have only
2 divergent spines)

Lycaena? on V. acerifolium
May 30, 1869. Mus. long
3mm wide, rather flattened
segments 4–11 wrinkled
up dorsally. Head small
detachable & brown shiny.
Light green, dorsal folds
paler, a brown dorsal
stripe. Body closely covered
with minute white spots
and minute pilus white
Hair longer before and
behind. Beth bag 5 to
is a darker shading
concolorous with dorsal
shade. D. shade not
extending beyond the dorsal



folds. Segs. also folded
laterally below spiracles.
Pupa June 4 On back of leaf
by tail and girdle
Lateral outline flat below,
dorsum of abdomen arched
depressed behind thorax which
is again arched & narrower
than abdomen, color brown
with dark dorsal line
& 4 dark subdorsal stripes
on abdomen, 2 behind
thorax & 2 posteriorly.

Unmodified drawn

Cuyama June 1, 1889.
Eyes green, thorax greenish
testaceous with a wedge shaped
spot on each side ~~the head~~
extending from above the
middle, upward, over the eyes
a broad white ~~band~~ stigmatal
line, edged above with
green darker than ground
color, a narrow subdorsal
& dorsal white line then
latter edged with
darker green. Body smooth,
a few whitish hairs each
surrounded by a minute
whitish ring. Top of joint 2
cervical plate, concolorous





with the head. Legs
green, thorax & feet
tinged with brownish.

A. octomaculata from Boston
Jun 12, 1889. Body cylindrical
when at rest but bent up
at 5 & 12 12 permanent segs. Head
orange with about 30 black
spots with white hair
indistinctly mottled
with brown. Body
white with many fine
transverse dark brown
lines 5 to 8 on each
segment. On the middle
of each seg 2,3,4,13 a transverse
orange band bright on
the sides & often obsolete
dorsally, sometimes
reflecting 1 or more of the



~~brown~~ ~~black~~ lines, in which is
situated 2 rows of alter-
nating black spots inter-
rupting the brown lines
& furnished each with a
white hair. A ~~signate~~
subcentral row of white
spots concolorous with the
ground color, of varying
size, on ~~but~~ joints 11 & 12
usual largest. Venter
bluish white shaded
with dark brown the rings
bounds outlined, spotted
with black. Base of legs
orange with a black spot.
legs black outwardly

dasperes dirty brown
The larva appear
bluish instead of white
on account of the appearance
~~of the~~ of the black line
into the white.
Cinnabrine.



Footmed? on the flower
heads of fennel at
Plattsburgh & Rhinebeck
end over June 20, 1889
Head a large cinnabar
spot shining black.
Body citron yellow
with a row of black
pilliferous dots per side.
doubled dorsally by
2 more dots per side
(Dots not very conspicuous)

129 occidentalis

SATURDAY, JUNE 10, 1876

Apatela? m. glen June 29, '89
Head dark mahogany red
with bluish shading
& a large pale mark A
above the mouth; Body
pale violet with a
broad delicate dorsal
stripe widening towards
the head and ending
in joint 12 in a large
elevated circular
black spot bearing
black warts furnished
a few tapering hairs.
On each joint a row of
cream colored warts
furnishing a few tawny

Pl 13
Aug 29 '89

SUNDAY, JUNE 11, 1876.

hairs. Two of these were
situated in the black
dorsal band & the band
thrown out a spur on each
side, the half enclosing 2
more (on joint 3rd-11)
A dorsal row of red
spots, 2 per seg! A faint
yellowish subdorsal
line. Stigmatal & sub-
ventral spaces (venter)
duller colored than
subdorsal space, sides
of the body furnished with
tolerable hairs. Spiracles
black. Length 25 mm
(See DA 329 for moth)

MONDAY, JUNE 12, 1876.

Hardeman(?) large Aunt
Rutto found in the cellar
July 7, 1889. Head pale
brown with bluish
reticulations most
distinct in the middle
of the lobes. Body
pale livid with a
pinkish tinge, im-
maculate beneath.
Dorsum & sides covered
irregularly with dirty
brown patches & diffused reticu-
lations most distinct
centrally on the segments.
Cerium about shell
brown square in



TUESDAY, JUNE 13, 1876.

front but distinctly
of its angulate escaute
& from the middle
alerts an indicate of
the obstructed normal flow
of arachno blood, A
few about pale brown

BB6 cont.

WEDNESDAY, JUNE 14, 1876.

Or V. Strittmiensis at
Nlata to, July 30, 1890,
Hd dull white, ~~[illegible]~~
white, jaws & eyes black
W 1.3 Body white with
black dorsal line.
Somewhat interrupted
in seg. Postures. Tail
flaff. Dist. 1/3 yellow &
hair from stain, rather
thinner centrally
Mot 8 Aug 3 Hd rounded
dead white W 1.6 mm
Jaws & eyes black. Body
white & interrupted
black dorsal line
Long abundant white

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C .5 | .7 | .8 | 1.0 | 1.3 | 1.6 | 2.1 | 2.6 | 3.2 |
| 7 — | — | — | — | 1.3 | 1.6 | 2.1 | 2.6 | 3.2 |

THURSDAY, JUNE 15, 1876.

Hair like cotton
& a thin pencil of black
hair from 12 dorsal.
Teeth somewhat greenish
Mot 1 Aug 7 Hd acute W 2.1 mm
Body white, dorsal line
black certainly. Hair
black & white, white black
tabby & extremely pencil
mot 2 Length 20 mm
Mot 8 Aug 13 Hd W 2.6 mm Body
same Pencil on 12 stripe, black
tipped with white. A tape
black ~~[illegible]~~ says band on vertex of
5, 6 & 11 (now on 12). D. line
black. 6-12 broken at seg
postures. Hair very fluffy white
Thus feet blackish

FRIDAY, JUNE 16, 1876. Wind 3.2

Moist & cloudy. Had a little rain. Heavy wind over the bay. Below eggs, the centre in ratio of black & white. Black & white, a dorsal & lateral row of black spots. Hatching white, black dorsal & lateral from 3, 4 & 12, shorter ones not reaching above other horn on 6–11. Also spots black, also hind tarsi, the dorsal red, the lateral spots are inverted cordate, the dorsal almost outward. Eggs shed after hatching with all vents (some copper yellow, white yellow, brown. Female face brown tufted, with black.)

Stem of Helicopter 1882

SATURDAY, JUNE 17, 1876. 1882

Cyrtoteia adalenta made chrysalis

{ June 17 – October 6 1882 }

Pupa cylindrical, thick, large from fold across back, curved and gently depressed. 3 anterior pairs of cases collable & motion in each and seg (not 1st to 3rd) on the next anterior, and the last pair to head non-collable seg) contained a row of punctation depressions while beneath the wing phase & metacarpo etc. Cremaster short, thick, conical with very many short elevations or aborted spines. Pupa very strong motion, red, the cases edged of a dark [illegible] has very slightly L. 20, W 6. greater

SUNDAY, JUNE 18, 1876.



MONDAY, JUNE 19, 1876.

3 more C. Atlanta made Chrysalis.

TUESDAY, JUNE 20, 1876.

Cynthia Atalanta made changeable. He was grey with white shine, instead of black. (flying in lin(Dng it))



WEDNESDAY, JUNE 21, 1876.

THURSDAY, JUNE 22, 1876.

Cynthia Halaiba w. b
made his Chrysalis
in the night!

FRIDAY, JUNE 23, 1876.

1 Cynthia atalanta chrys.
Got lot of little cater-
pillars on elm leaf
Aretia Texsor & think,
Aretia Virginica laid
140 eggs in Aretia box.



1 Cynthia atalanta chrys.
Got 3 chrysalids of
Vanessa antiopa.
1 cat. of popular.

Got 2 chrysalids & 1
cat. of V. antiopa.
Strefac dryocampa
came out. (Poggana minio



Cynthia atalanta
came out, no 1.
Hyperchrysa senatoria
came out.
Got burdock caterpillars

Eggs of Arctia Virginica hatched.
Out Attacus Cecropia out
Cynthia ailanthe no 2.
out, 9½ days.
Lot caterpillars on
wild morning glory,
discarded in other bottle.

FRIDAY, JUNE 30, 1876.

SATURDAY, JULY 1, 1876.

SUNDAY, JULY 2, 1876.

Got Willie Dailed
caterpillar on poplar.
Got also a number
of eggs on the back
of a poplar leaf.
Bebe (Lycaena atalanta)
prepaired a house
for transformations.

MONDAY, JULY 3, 1876.

Bebe was turning off 6 a. m.

TUESDAY, JULY 4, 1876. 82

Babc chrysalis.
Lycaena atalanta
no 7 out. Lib 90.



WEDNESDAY, JULY 5, 1876.

Vanessa Antiopa out

Vanessa Antiopa out.
Got Endamma Lilytrus
caterpillars at Willis.
Got some eggs on
a locust leaf.



Vanessa Antiopa out
Deilephila lineata out.
Got 2 Danaida Archippus
caterpillars across
the river.

SATURDAY, JULY 8, 1876.

Locust leaf (July 6)
eggs hatched, little bug
but some eggs on
ash on black fence
Got more Euvanessa
Antiopa caterpillars,
Got Brown, speckled
with blackish caterpillar on Strawberry (Got 26)
[



SUNDAY, JULY 9, 1876.

Got elm caterpillars
and eggs.
Got Polygonia Comma
Comma's no tails.

MONDAY, JULY 10, 1876 ~~82~~

Eggs on milkweed (Euchaetes Egle) hatched



TUESDAY, JULY 11, 1876.

Got Polyommatus Comyntas male & female & Senatoria. Hawaii Archippus and their skins for the 2nd time since we got them. The 6-legged yellow cat. are nearly all chrysalids. Got some small cats on elm and ash.

Let out of the A. tiptoes 90

WEDNESDAY, JULY 12, 1876. 82

(1877 cont) On golden Hrg 39.89 (
had bilobed, black, a few
hairs W1.8 mm broad, white
hairs inserted. Hairs tipped
little knots, obscuring body
tarsus, hairs tipped with
knots, wheat
antennae yellow. On 4, 7 & 12
a black dorsal tuft
higher than the rest of
hairs & in 8th space
dorsal spine 5-13 other
hairs white. Moth Hrg 7
bilobed, amount black
being a few scattered hairs
Hairs white W 2.4 mm



THURSDAY, JULY 13, 1876. 82

Got 2nd Papilio
Troilus on Sassafras
Green cat on fern. (A Pedata)
2 aretias of frigweed
(not virginica

Lycaenae, Miss Browne
1st woodbine cat. Sfum
[Alypia 8-maculata Bd]

Body black, ofwards white
surrounding, stigmata & dots
dark, many hairs tipped
thus as before, thick but
strongly tipped with
white. Moth Hrg 13 black as
before, slightly crenend

FRIDAY, JULY 14, 1876.

2 Feather winged
moths came out
Manoia Beliffera
hanging up.

Syracuse Mrs Lizzie
and Woodbine cat. Spun
(Shed bd 3.5)
W 3.2 Body black as
before, wants & horns same
but tufts don't little higher
than other horn which
is all tipped with white
Prol & tibia 20 red flagging
along. Cat. [illegible]
V-shaped [illegible] 11 to
[illegible] 13-[illegible]. W. H.



SATURDAY, JULY 15, 1876.

Feather winged moth
came out.
Turning yellow cat. came
out. Red frog with black spots

Body black, abdomen white
wants black, horn along, [illegible]
[illegible] horns [illegible] & black, [illegible]
[illegible] tufts [illegible] [illegible]
horns are [illegible] all [illegible]
tipped with black & white
[illegible] black [illegible]
each [illegible].
Coon 5 eggs

SUNDAY, JULY 16, 1876. 52

Both Lancaster & Leipsic
caterpillars are chrysalis
Cocoons are yesterday

MONDAY, JULY 17, 1876. 52

TUESDAY, JULY 18, 1876. 82

~~(Papilio Asterias are chrysalides)~~

WEDNESDAY, JULY 19, 1876. 83

Arctia Virginica ex larva

THURSDAY, JULY 20, 1876. 52

Some Papilio Artesiae are chrysalids)



FRIDAY, JULY 21, 1876. 52

~~Acta Lepton spun.~~
~~A. barbetta spun.~~
(July 23)

SATURDAY, JULY 22, 1876.

Got 20 Eudamus Tityrus
caterpillars on vine.
Got 10 Papilio Turnus.
Got 1 Papilio Asterias.
Got egg on sassafras.

SUNDAY, JULY 23, 1876.

Pieris Protodice and P.
Isabella Sfum.
Several P. Asterias
are chrysalids.
Got 2 cats on woodbine,
Endryas Grata.
Got some Euchaetes Egle.

MONDAY, JULY 24, 1876. 82

Papilio Ajax chrysalis
Orgyia leucostigma
made cocoon.
He was from Niagara
falls.



TUESDAY, JULY 25, 1876. 83

Manaia Prolifiana
came out.
O. leucostigma is a
chrysalis.
Black Sphinx Aunt
Lucy got is a chrysalis.
2 A. Virginica made cocoons.
Eggs on poplar (July 2) hatched
Got 1 pale green sphinx
striped obliquely with
white on the sides.
Got 1 lilac ob yesterday
Lewis brought 1 lilac ob
damaged the day before.
Got female Leshia
Philodice while laying
eggs Brought home

Put 6 little caterpillars
of Papilio Troilus
back on the sassafras
and got 1 larger one

Papilio Asterias



Danaus Archippus No 2
cameout. Kidd's spread out
green shiny (2nd good 1)
entered the ground
I got him today on
the sand hill.
Got 1 Papilio Troilus.

made chrysalide.

FRIDAY, JULY 28, 1876. § 2

Lost 3rd good Green Spring at Mrs. Ashe's. Butterfly net made. Caught Papilio Turnus and male Melitaea Phaeton



SATURDAY, JULY 29, 1876. § 2

Went out for butterflies with net made yesterday. Caught several, among which were Argynnis Aphrodite, Endamus Bathyllus and Hipparchia Alope.

SUNDAY, JULY 30, 1876. 12

5 Papilio Asterias came out.
6 ang. hat 1 good P. Zurima
(3:15 p.m. Let 2 male
P. Asterias (clipped) go.
3:40 p.m. Let 1 male
P. Ajax (clipped) go.
Last Asterias became chrysalis

MONDAY, JULY 31, 1876. 12

Papilio Troilus chrysalis.
6 P. Asterias out (1 not clipped)
(6:30 p.m. let 4 P. Ast. go
(clipped) 3 male 1 female.

Got 1 Endamus Litigiosus cat
" 1 Brown Sphinx grape
3:20 p.m. 1 male PA (clipped)
Arctia Isabella (Spinus
this year) came out
6:45 p.m. 2 male PA (clipped)
3 Papilio Asterias came out
Caught at the black
fence 4 P. Zurume, 2
Argynnis Aphrodite 6
2 Pyrgus tessellata 6 [illegible]
Hall go out 1 Lycaena [illegible]
Got 1 Lophocampa Caryae
Got green cat, spotted
with black, large head
holds up his hind
feet eats lietsery



Got green
8:30 a.m. 3 female PA (clipped)
8:45 a.m. 1 male PA (clipped)
9 a.m. 1 female PA (clipped)
4 p.m. 2 male PA (clipped)
Got 1 red Philampelus
Afternoon in the little
lot at the track Arctia Arge
Got 1 cat. Endrymas Erato.
2 cats like C. Pampinatrix
without red spots on back
Some eggs on woodbine
7 Papilio Asterias came out

6 a.m. 2 male & 2 female
P. Asterias let go (clipped
but 1 Orgyia Leucostigma
2 p.m. 2 male P.A. (clipped)
but across the river
1 Lycaena Pomonicana
with notch in wings
1 Papilio of a new kind
2 cats Orgyia Leucostigma
1 little green sphinx
10 Papilio Asterias came out
7:10 p.m. 1 female P.A. (clipped)
Mother found a caterpillar
of a dagger moth which
I think is Acronycta
Americana



(6 days)
8 a.m. 4 female P.A. (clipped) let go
Orgyia Leucostigma out
2 Choreampa pampinaria out
2 Arctia Virginica out
12 m. 2 female P.A. (1 clipped)
2 cats of Dryocampa Rubicunda
2 p.m. 1 female P.A. (clipped)
6 female Papilio Asterias
came out. 1 not spread.

SATURDAY, AUGUST 5, 1876.82

8:15 a.m. 2 female PA (clipped) (yesterday)
Papilio Troilus 2, chrysalised
Larvae Catocala Ilia
1:30 p.m. let go 3 female
& 1 male Papilio Polyxenes (clipped)
Eat 3 more cats. Papilio Troilus
5:15 p.m. 1 female PA (clipped)
5 Papilio Polyxenes came out
Eat 1 Vanessa Antiopa cat.



SUNDAY, AUGUST 6, 1876.82

9:15 a.m. 1 female PA (clipped)
Vanessa Antiopa made chrysalis
Orgyia Leucostigma no 2 spun
3:30 p.m. let go 1 female PA
(clipped) not well (could not fly) spread out.
Eat 1 chrysalis of female
Orgyia Leucostigma
Eat 1 cat. of Vanessa Antiopa (second)

MONDAY, AUGUST 7, 18~~76~~ 82

1 female 1° A. (Chappell) L.A. 9s
2 Chronic Pam
priapism chronic
2 Aortic Extra cam
out, male & female
Vanessa Antiopa (tomorrow) no 2, chrysal



TUESDAY, AUGUST 8, 18~~76~~ 82

WEDNESDAY, AUGUST 9, 1876. 32.

8:15 A.M. 1 male f. about
moth from brown cat
with green neck raising
last leg is out.
Left across the river
Lemaire Aeliffus,
N. nymphalis Leuippe,
Heterocampa marginatus
Left Nymphalis Epidusa
but he escaped.



THURSDAY, AUGUST 10, 1876. 33

Perle caught a slightly
battered Nymphalis Epidusa
1 female Orgyia leucostigma out

Oeyria Leucostigma
no 3 chrysalised. female
Aretia Isabella out.
(See Aug 3) L. Americana
as a chrysalis. He been some time so
I have a cat. looking
like an arctian. He is
brown with a black band.
Light strips on his side.
Brown hair blacker
on his head & tail spread-
ing from warts. Lost
of cotton segment & pink

Got Saturnia Io (no 2)
(Uncle Joe caught
Papilio Zhoay 1 tail gone.
Got 2nd Apatela Americana
Got 4 Ceratocampa Regalis
Got 2 Ceratomia 4-cornis.
& other small cats. at W.



Got, in Boston, an
awful lot of cocoons
& batches of eggs of Orgyia
Leucostigma.

TUESDAY, AUGUST 15, 1876.



WEDNESDAY, AUGUST 16, 1876.

THURSDAY, AUGUST 17, 1876. 82

Got, in Boston several little brown & yellow cats.



FRIDAY, AUGUST 18, 1876. 82

Lit on a Vanessa Antiopa Bot

SATURDAY, AUGUST 19, 1876. 82

Got 2 cats Attacus Luna.
Got about 8 cats. at
Minds. They were bluish
white. Head, legs, & tail
yellow, & black warts
on each ring, on 2nd
& 3rd rings 2 long red
warts, on 11th ring 1
long yellow wart. (yes)
Are they Attacus Promethea?



SUNDAY, AUGUST 20, 1876. 82

Got 9 Attacus Polyphemus.
3 cats of Papilio Turnus or ash

MONDAY, AUGUST 21, 1876. 22

Got in Water co. 5 M. Kreippe, 3 Argynnis Idalia, 3 A Belmon, 1 M. Ephiectron.
Got 2 cats. color grey, on 5, 6, 7 & 8, & 10th rings black tuft of hairs on back, Hairs on side of body & neck, red brown velvet, on legs, & green spots on each ring, striped with black lines, Head & feet orange, black stripe beneath, 1½ inches in length. Found on an ash tree on the mountain.

Sat Aug 26

Spatoch angelica



TUESDAY, AUGUST 22, 1876. 8

Got 4 Shining Quinquemaculatus 2 with cocoons of parasites on.

WEDNESDAY, AUGUST 23, 1876. 82

Sot 3 ♂. Quinquemaculata
1 with cocoons on twig.
Sot 1 Attacus Blyphemus
Saturnia cl 1 ♂.



THURSDAY, AUGUST 24, 1876. 82

(B 113 cont.) the poplars Brooklyn
Intw Aug 8, 1890. Hd wider
than high, W 3.4 mm wings
greenish white, crown &
antennae white, eyes black &
body black, clothed a
little ventrally, joint 13
obscurely indistinct. Transverse
dark ✱ chiefly seen with
2 transverse fuscous of
small round slightly
elongated yellow spots, ~~[illegible]~~ on thorax. Usually
on 3 are 2 flecks laterally
close together, colored red.
Dr 5, 7 & 12 over the dorsum
non-pred above spiracle

Got Vanessa Cardui
" Limenitis disippus
" large Acronycta Sp.

On a curved slight fold to convex toward the next and of body, colored with yellow & bordered by groups of a fine black line. The blue & red spots have a red band distributed above with yellow. Spiracles small white, surrounded above by a narrow black speck





Got 1 Ceratocampa Regalis
" 1 " Limenitis Disippus

(552) On witch hazel, Plattsburgh N.Y., Sept. 15, 1874. Hd slight below, bilobed, dark white covered with rounded olivaceous mottling patches composed of closely aggregated dots, these separated by irregular lines of the ground color. W. 3.7 ± Head a little enlarged at P. ill in a square, varied with black and a few small radiate lines. Chrome green. Pales S.V. a broad creamy white

SUNDAY, AUGUST 27, 1876. 30

(1 mountain cat. became
chrysalis without cocoon.
2 Pygaera ministra orig.
chrysalis of mountain
cat. smooth & shiny
7/8 inch long. row
of elevated dots on
each ring 3 of them (the rows)
rings all around,
between which 3 are
2 larger elevated dots.

Aug 21

dorsal band (reaching to iii)
but retracted up on 12
c-sh olivaceous do also
front part of 3 & 4 dorsally
on 5, 8, 9 & 12 a



MONDAY, AUGUST 28, 1876. 28

but some blood-red underneath

rounded velvety dark
brown patch slightly
olivaceous, covering i ii iv ex-
cept on 5 where it only
covers i; similar pale
olivaceous patch covering i on
6, 7, 10, 11 and 13, the latter
darken a elongate; a
faint V-shaped apex
backward extends forward
from the apex on 12. Feet
red pale. Spots black
Spiracles white, black rings

TUESDAY, AUGUST 29, 1876. 82

Got some Saturnia Io cats
" 11 S. Maia cats. on
wild cherry, "black co"
Got 11 Cerura Borealis cats
& Pygaera* black longitudinally striped with
yellow, a few long
white hairs, top of
head red; rest, and
feet & tail, black.
Black also on 11th segment
dot / & inverity three hairs
Got some other cats.

*Oeneogeta Radcliffei 16 Oct 83



WEDNESDAY, AUGUST 30, 1876. 82

Got one S. Io cata.
Got A. Luna chrysalised

(BOIIG) Body faintly greenish,
mealy white with obscure
dorsal & lat. white lines,
the 3rd space considerably
overwashed with white. Wings
large (expanse is very arrived)
with considerable long silky
white hair. Spiracles faintly ochre
Not fully 14 segmented, claw
black, a yellow Δ spot in
clypeus and one bifurcate each
side next clypeal suture.
a few white hairs on 4.5 &
Rbof black, a little grayish

THURSDAY, AUGUST 31, 1876. 82

L D ~~after~~ 2 C. Borealis.
Attacus Promethea Sphin

a series of ♂ white spots
between i and i on 7-11.
Feet and venter pale, abdo
plate white. Wats large,
pale gray; hair very long
abundant, white. No
secondary hair. Spiracles
white.

Charadra deridens
(See Packard Fre & Inv)



FRIDAY, SEPTEMBER 1, 1876. 82

L D 2 Saturnia L. cecropia
Attacus Polyphemus Sphin

SATURDAY, SEPTEMBER 2, 1876. 82

The first P. Troilus came out today.
Got a Sphinx on rock



SUNDAY, SEPTEMBER 3, 1876. 82

and Mountain cat, made a chrysalis without a cocoon as did the first

MONDAY, SEPTEMBER 4, 1876. § 2

Some lo's again.
Telingalis, found in
cocoon on poplar a
few days ago, is
white with some black
on it.



TUESDAY, SEPTEMBER 5, 1876. § 2

21 § Them

Found a Limacode, an
Wild cherry (No. 1) Descriptin-
4/5 in long. Silky, color
red, with brown markings.
2 Short thorns on 3rd, 5th,
8 11th seg. covered with
spicules, 8 row of fleshy
on each side. Thickest
near the head & tapers
to a tail. Head is brown
3rd 3 cuts, 2 not below / is
afum. For description
see Jan. 15, page 33 (No 2)
Not some other cents.
Not Psyche. Black
speckled with white. Head
fed ocd. (P. Inconclusta (H))
Datana major (50)

WEDNESDAY, SEPTEMBER 6, 1876. 82

Got some cats.

(B5104) Med. Hd 3.6 m. As before Body as before, the dorsal green patch covers the back from 5 first to 13 and extending irregularly to the end but not to divisions 14, containing 2 dorsal patches of same color mottled with dun one on 5-7 & a little on 8 the other on 10. The green patch is a little irregularly distributed but the sides with an irregular dark band



THURSDAY, SEPTEMBER 7, 1876. 82

Got some (3) flat crocus on Ward's well No 3. Eggs had come out.

on 5-7 & by a dark shade on 8-10, Spiracles black with from central line. 230 Hump on 12 is slight.

FRIDAY, SEPTEMBER 8, 1876.82

Got some Attacus Polyphemus caterpillars.
Got a large green Ceratomia Quadriceps
Got 3 more Cocoons of poplar cat., or ash.

Lepidoptera



SATURDAY, SEPTEMBER 9, 1876.82

Got some Dryocampa Rubicunda cats. at W.
Got 2 Ceratomia 4-cornis

SUNDAY, SEPTEMBER 10, 1876. 42

No. 4. Green Limacodes
eats wild cherry.
.6 in. long .3 wide.
It has a tail & a point
on each side in the
middle of the back.
White lines along the
back, 2 white spots near
the tail. A few white &
brown markings on the
sides. Found sometimes.
No 5 Rusty Limacodes
Eats wild cherry. Color
blackish yellow. 2 yellow
stripes along back. 4
longitudinal rows of
warts covered with prickles

(№ 6 See pg 34 Jan. 16)



MONDAY, SEPTEMBER 11, 1876. 82

left yesterday, L. learyae,
cata. L. 363, & 6. 4 cotinis.
1 cocoon of Polyphemus on
ash (See Sept. 8.) with
cat. not changed. It
is a larger 1¼ in. long,
rosen, 10 legs, largest
in short part of his
body, that is without legs.
Today - 2 Attacus & Polyphemus
cocs. began to spin
1 A. Promethea spun.
Unwritten - Dying of a Nut clg.
Got 1 cocoon of Polyphemus on
an ash (See today & Sept 4)

TUESDAY, SEPTEMBER 12, 1876. 12

Got a lot of cats —
Lophocampa 363,
C. 4. corvis, Cecropia Bur-
alis, A. Polyphemus,
L. Cecropia, &c &c.
Got a yellow moth
spotted with brown
The shape of a Smerinthus



WEDNESDAY, SEPTEMBER 13, 1876. 52

Got cat. on lilac about
2 in. long. Ground
color brown with white
on the sides meeting
over the back. covered
with a few hairs, and
the former skins shed
its head sticking to the
hairs on its neck. The
11th segment is humped.
Got has 16 legs. No. 7. {Lubb 66}
Got 3 Sphinx Ceiuna
2 had flies. There were
208 cocoons on one!

THURSDAY, SEPTEMBER 14, 1876. 82

Got 1 Sphinx Cinerea
Got 5 Mountain cat.
1 Dry, Campa Imperialis
2 ash-tree Sphinx
Got 1 cocoon of Attacus
Promethia on sassafras

(BB 105) on Maple oak, Aug 2
1876. Hd. length two-tenths
only a little narrower at
top than bottom, flat in
front and at sides, depressed
slightly in median outline
smooth shining white,
with 2 vertical dark brown
bands mottled with
yellowish, one on each L



FRIDAY, SEPTEMBER 15, 1876. 82

Got 1 large Ceruna Borealis.
Got a Sphinx on oak
and 1 (different) on maple.

Lvae on front & sides, dark
inwardly, joined by a quad
△ patch but vertex, thus
dividing the green color
between these into 3 white
spots as 2 sub-D above, 2
round centrally and a
large spot curving and
extending a little beyond
△ plate. Sensorium, inner
antennae white, dorsal
aspa dorse fuscate brown

BB 105 5 lb contracted mostly at body high Tem

SATURDAY, SEPTEMBER 16, 1876.

First Limacodes "Roar" spine.

Mottled, irregularly darkening the general color into spots. W 2.6 mm (2.5-2.4) Body shaped as in Coelodasys but not dimpled as is Lim; a dorsal process lobe, pointing forward, surmounted by 2 tubercles on 12 a slight hood conical lunch bearing 2 tubercles. These represent the consolidated tubercles of Coelodasys and are all present but minute or



SUNDAY, SEPTEMBER 17, 1876.

One of the cocoons of Sphinx cecropia came out, male. Moth same as Sept 12 (See Sept 11 ref) Bastophora Americana came out. It is B. velleda ♂ a female. 2 P. Limacodes suspended. Lost some H. donatrix (?)

Larval ones native some distinct, each with a hair. Feeding observed, the last four outstretched as in Coelodasys. On the hoodless region of 2-4 except at Nos 12 and a rudimen

MONDAY, SEPTEMBER 18, 1876.

Male Eastropacha Velleda (No 3, found on Wilde's well Sept 7) came out last night.
Got a full grown P. Luna cat.
1 P. Luna chrysalised

Usual brood on 2-4 morning frost almost to obliteration on 4, is a dark green patch, another in the division of 6-13 (od-sp) on 6-7 partly replaced and much with brown and mottled with brown



TUESDAY, SEPTEMBER 19, 1876.

Another female poplar cocoon came out.
Got 2 green Sphinx spotted with red, on elm.
1 P. Luna chrysalised

gradually coming down the outer side from the apex on 10, leaving a little and broadening slightly at the anal fold. The rest of the body in the dorsal & lateral regions is colored irregularly mottled with dark

WEDNESDAY, SEPTEMBER 20, 1876.

Got some another
& spread them out

brown which predom-
inates in 2 shot dorsal
fin a curved 2 out 5 a large
brown 2-4 in a
3-curved
2-V line bordering the are
green patch below &
sending a branch over
the spinach on 2, on
anal plate, anb stripe
on 6 & 8 and ~~a centre~~ small
on 10 = 12 a dorsal patch
of ground color on 10, the
dorsal processes are
tipped with brown but
the tubercles white.



THURSDAY, SEPTEMBER 21, 1876.

Packed all the cats.
& chrys. for Boston.

Visit Lunt to examine
a round white spot
succeeded above & below
by other smaller ones
base of 12 & centre 2-4
feet on 7-9 wavy white
center 5 6 & neutral
band 11-13 opaque white
the feet finely rounded
with brown, each with
2 curved brown lines,
in 10 obscured by the
heavy brown shading
and feet limited

(See Sept 6

FRIDAY, SEPTEMBER 22, 1876.

Ovi-chestnut & white on July 15, 1890.
Stage 2 mm hd. slightly elongated, yellowish green with shrivel, mouth & yolk pale, eye black. Body opened & marked with white, a faint yellowish & brown colour also tinged areal plate. A few abs. in cavity. Length 16 mm.
Stage 3.3 mm hd. as next stage, moff July 15 hd 5.5 mm. Potential gen. minutely elongated & no depression at summit



SATURDAY, SEPTEMBER 23, 1876.

eyes black on white grund. Body pale & tolerably pale, gas yellow outwardly, black inwardly. Body same colour of green, somewhat pinkish on dorsum with numerous elongated & elevated yellow spots like very small pearls on the sides, & also dark pigt. A yellow sol. bar not reaching entire extremity, and pale bordered with yellow. Finally pale reddish brown red brown narrow bordes. [Another had

dead

SUNDAY, SEPTEMBER 24, 1876.

Little me moult July 18
bed ~~pale~~ dead yellowish
green. Eyes black. W 2.7 (2.5+, 2.7)
Body whitish green
with yellow & black hair
& tinge to anal plate
moult July 27 Hd 3.6 (3.5+, 4)
moult Aug 3 hd 5.5 (5+, 5.5±)
Pupa a dark glistening brown
robust structure off first of
cases, rounded, rather fully
both ways, cases not
prominent. Cases to a
single spine with 2 bits
pointed forward, outward
body pointed. Cases creamish
color dark mahogany red
cases almost black L 20 W 6½



MONDAY, SEPTEMBER 25, 1876. Chrys in cocoon leaves book

Cocoon of silk in rolled leaf
close fitting to form
top flattened with
lateral ridges & eye-
like edges prominent.
Blunt at both ends, the
head square, abdomen
not tapering but the last
segment blunt, curved
upward, teeth divided
with a tooth, smooth.
Body pale green, thorax with
very coarse finely chiseled
dark dimpled yellow
the lines & their legs
shaded with bluish
brown ~~with the tarsi~~
and the dorsal light stripe
stained a dark brown.
Pupa W 4.

TUESDAY, SEPTEMBER 26, 1876.

July 29th. Found, flattened front
mouth parts protruded down
dirty orange, shining eye black
mouth brownish W2.2 mm. body
Thorax well developed with
claws, fat orange, and, about
their places represented by black
marks on all segs, and black
w.4. Black little bilobed
S-v. 3p. dirty yellowish fin
anal plate & many short
hairs, on latter in 4 rows
one 3 per seg. (magnified) the
1-v ones longer & strong ones,
Length 22 mm Cocoon of white
brown, chitinized of Pegnu



WEDNESDAY, SEPTEMBER 27, 1876.

with 2 rows of spined chit
tubercles (Dis 5-d 1p centr
5-12 (2) 2-d most dorsal
lateral small, (B) v also
present on 5e small, no
(C) is there triple, 2 bottle
mouth parts, and small
ones on anal plate; cells
beneath this which have
high polished, fold
slightly green. An inter
ufted 5-d which is large.
Pale dirty yellowish.
Jun Fig. 31 Hd as before
pal parts, dark with
mottled with black on in
side W2.2 brown black

THURSDAY, SEPTEMBER 28, 1876.

Salmon with spots. Dorsal
fins & tubercles smooth
conical, those on the side
very small, each with
a bloom. Did hard
much interrupted, as
dorsal & 2 lateral lines
of yellow dots bites on
[illegible]
worst D c ♀ [illegible] and
by horn rings which
should together [illegible]
obtain [illegible] of
dorsal fin.
Wt 8 Aug 16 Hd 3.2 mm
Fat dull yellow back [illegible]
pale white [illegible] Dfd



FRIDAY, SEPTEMBER 29, 1876.

dorsal fins & caudal dots
the upper 2/3 mottled with
spots composed of segregated
of dots which dots in spots in
clusters. Most fins white
[illegible] Head. Back dark
brown, pale white till ventral
[illegible] yellow, each with a
bloom; [illegible] 5th space a 20
large crescent oblique
pale yellow patches tinged
with brown, each on 1 seg.
and extending [illegible] into
the next. 2 lateral rows
of minute dots dist crowded
& interrupted, and irregular
[illegible]. Girdle white

evening ♀ & ♂

evening ♂ and ♀

SATURDAY, SEPTEMBER 30, 1876.

with narrow black borders
the spots become actively
enlarged & deep red appearing
orange colored
Fed to pupa on Aug 28

Bred by Mr. H. Mr. winter
of 1873-4
Acronycta sp



SUNDAY, OCTOBER 1, 1876.

On birch foliage at Lincoln
single but several on elm
petioles in house of Lemuel
Smith. Yellowish [Egg
shells 2-7 on upper side
leaf, not touching. Hatch
Oct 2, base of Ht. Color
? (Shall one decide notes)
Diameter of egg Hatch day or
hole in the top] Hd 2.2
round, flattened in front
depressed at the anterior
black, shading into brown
centrally, base of anterior
pale. Shining, a few hairs
body sordid white flat,
a subcranial white tuft

MONDAY, OCTOBER 2, 1876.

dorsal hump, each surmounted by a pair of pilliferous tubercles. Dark wine red, the 2-d space except 5 & 12 yellow & containing 3 winding lines. 7 tubercles each with a hair, those in subjectivity space larger & yellow the lowest 2 pair coral (on 7 & 8 more yellow) & [illegible] plate, the first & second [illegible] venter paler = finish, the first brownish. Feet normal, hair white. Mol Arg 2 (4-d 3.7 (4-3.5 ±) 4-d blade punctured, with some hair, broody



TUESDAY, OCTOBER 3, 1876.

form bordering the anterior & a median stripe black. Head & antennae white. Dorsal processes anterior long, on 12 shorter, black. Body deep or purple brown, approaching black. Body as before. Anterior attached above & on yellow tubercles become gray and the purple brown stripe mottled white & white and fading to brown. The dorsal processes on the sides been more diffuse & larger surrounding the spiracles in a large patch and extending on 5 & 12 dorsally & joining the processes and a coarse [illegible] hairs

WEDNESDAY, OCTOBER 4, 1876.

of little [illegible] web like, rather strong, hid thin [illegible] 10 cylindrical, a little depressed basally, very edge prominent, concave gently arched, abd. segments tolerably [illegible] consists of a longer apice, curved downwards & a little thicker at the end; it is well furnished in the axils of cocoons. Dark blackish brown, the body finely mottled with reddish brown and the wing cases also



THURSDAY, OCTOBER 5, 1876.

the pecim [illegible] finely with same colour. Spring. Eggs separately, frontal, white but soft. Cases [illegible] Image Aug 17

[illegible] Hd 8 / [illegible]

Sphinx alba [illegible] [illegible] 2 [illegible] [illegible] 6 mm. [illegible] purple [illegible] the [illegible] [illegible] [illegible] on 2-4, 6, 9-12. [illegible] extend across the back on 2, 5, 7 & 8, 12 & [illegible] on 13, not complete, [illegible] yellow on 7 & 8. [illegible] [illegible] dark brown purple [illegible] through, on 8 & 12 a little enlarged dorsally, [illegible] white [illegible] [illegible] [illegible] Hd 3. 6 Cem. S. 13

FRIDAY, OCTOBER 6, 1876.

cleaned out Lophocampa box. They have all opened. We put the cocoons in the box.

(End of diary of lepidoptera 1882)



SATURDAY, OCTOBER 7, 1876.

Chapter was embroidered from caterpillars. Body black speckled with whitish or white yellow orange markings which at the sides form a more or less distinct light orange longitudinal stripe. The spines are orange red, or pretty yellow, except those on the 2nd and last segments which are black. The feet and head are dark red the latter with 2 black spines. Elm & mottle.

a yellow dorsal line

SUNDAY, OCTOBER 8, 1876.

BB 12 (light). Black object with back elevated & bordered by 2 yellow lines. Back green (slightly on yellowish green) slightly spotted with yellow.

Limacodes pacifica ♂

BB 12 (tail) Black caterpillar as above but provided with a tail slightly reddish. Yellow is less distinct than in the preceding insect

BB 12 blacks

These are probably 14 of these

must be that character



MONDAY, OCTOBER 9, 1876.

Sawfly on alder (Alnus serrulata) June 16, 1890 (country road) Boston, thirteen feet long & strong, holds by these and curls up, rolls & thrashes if disturbed! Add feet on joints 5, 6, 7, 8, 9, 10 & 13 small used in walking. Head round flat before, shiny black, little paler at mouth. Quantity hairs sparse, yellow. Vr. 17 mm. Body with 2 rows of small elevations per seg. and one larger one above base of each foot. Prominent nipples. A black mid-dorsal line not extending on joint 2 and a general area of linear black dots above bases of the legs. Thirteen feet marked with black. Length 15 mm

(See next)

TUESDAY, OCTOBER 10, 1876.

A hymenopterous insect on currant, shining bluish green with yellow on segs 1, 11, 12. Head black, 6 prolegs black and 3 transverse rows of elevated black spots to each segment, coalescing at the sides to these larger spots. Immaculate beneath. When about to enter the earth, it sheds to clear yellowish green marked with yellow as before. No black except the eyes.



WEDNESDAY, OCTOBER 11, 1876.

1. Black, yellow stripes collar & spot yellow. Head & tail black.
Datana ministra

2. BB52. All black little stripe white
Datana integerrima

3. BB54 More distinct black character lines yellow
Datana drexelii

4. BB84 Lines yellow spot, head, tail black
Datana perspicua

5. BB81 Black, rows aqua white spots. Head, tail & spot dark red
Datana major

THURSDAY, OCTOBER 12, 1876.

6. BB70 Stripe yellow
Head spot & tail
tips orange red.
Datana palmii

1 Dorsal line, top & back
2 Stigmatal line, on spiracle
3 Subdorsal, ½ between above
Subdorsal & face. Bet 1 & 3
Stigmatal & face. bet 2 & 3
Venter, much part of body
Subventer, bet. spiracle
& base of legs.
(G. W. Coquillett, Com Ent
XII 108)



FRIDAY, OCTOBER 13, 1876.

Larvae of Datana

*Stripe [illegible] than [illegible]
[illegible] pores.
Dorsal stripe [illegible]
" " [illegible] (longitudinal [illegible])
" " [illegible]
" " [illegible]
" " [illegible]
** [illegible]
" " [illegible]
" " [illegible]
" " [illegible]
" " stripe [illegible] spots of
head & anal segment red. major

SATURDAY, OCTOBER 14, 1876.

Coleoptera on Elm trees
in Poughkeepsie July 30, 1888
Larva with 6 legs, yellow
with lateral black stripe
and black points on back
head & feet black
Pupa yellow, and pasted
by anal extremity
Imago color yellow
with black stripe

Galerucella
xanthomelaena

(BB 72 cont)

SUNDAY, OCTOBER 15, 1876.

"Entered for detail" Aug 27, 1888
Egg elliptical .8 x .4 mm
flattened on either side
~~(~~ minute longitudinal ~~ridges with little round elevations)~~, white. Laid
singly on in twos or threes
on either surface of the leaf
Hatched larva Body somewhat
wrinkled, swelled at ~~segments~~ which seem to
show minor processes. A
single row on ~~3rd segment~~
Last segment terminating in
a single short prolongation
color brown, black at
the ends. Head rounded black. Head
& body with thin very short
whitish hairs.

(over)

389 Aug 25 1890 2nd stage [illegible]

## MONDAY, OCTOBER 16, 1876.

nests near the edge of
the leaf on the upper surface
eating the upper leaf.
1 No 2 (Aug 31) [illegible] 4
to each segment. rough
with numerous yellowish
spiny, a transverse row of [illegible] with
portion a yellowish or brownish on back
brownish on sides : 2
conical processes on ~~first~~ joint 2
~~segment~~ and 1 on dorsal joint 4
(Head brown, notched and
rough.) Last seg. terminating
in a single prolongation.
Feeds on half the leaf.
2 No 3 (Sept 3) Same. Feeds
on the whole leaf. Hd. 6?
3 No 4 (Sept 11) Color more

Hd. 4

---

4 stage observed Sept 3 1890 [illegible] 390

[illegible] as an [illegible] from
granulation [illegible] color Hd. 9?

## TUESDAY, OCTOBER 17, 1876.

even uniform brown but
lighter on the back. the lateral
color tends upward on [illegible] 18
[illegible] granulation [illegible]
(See Dec 21)
4 No 5 (Sept [illegible]) nearly uniform
brown with head a little
lighter and a narrow
black dorsal line.
Head with 2 conical processes
the processes on 3rd seg rather
short but prolong[illegible]
first segment 3 as long
as the body. [illegible]
as before and [illegible]
[illegible] points
The larva [illegible]
this month, [illegible] on

the stems of the plants which they assemble & inter.

July 2, 1887. Viburnum acerifolium. Head bilobed, lobes pointed, brown paler laterally & between the lobes, roughly granulated, the granulations white. Body purplish brown. On joint 4 a dorsal rounded process pale brown with white granulations; a darker dorsal line. ~~On the~~ a white stigmatal band on joints 2-5 and on 11 & 12 paler; on each side of 6 to





10 is a dark velvety brown patch, rising with curved outline nearly meeting on the dorsum on joint 4; the rest of the body with white granules. Two faint white subdorsal lines on anterior segments. Last seg. prolonged in a single tail, brown ringed with whitish and densely covered with black spines. Another specimen nearly uniform grayish, top of lateral patch only brown, hump and brown, granulations only slightly paler than body

4

Prod'y Aug 31 Mature larva
head (large) not last
but elevated black
body reddish green
with 7 longitudinal
black lines, one dorsal
and three lateral on
each side, the lateral
outlines in 10 and
11, having also a good
color light blue between
the dor. also upwards on each side, and the
from A. Below, Above the
broad yellow band A:
below a row of large
black spots
black (by magnifying glass)
Back shaded
with reddish and

dissection 27 against





a little yellow just
above the lateral black
lines. The lines do not
extend beyond the 10th
segment, there being a
black spot on each side
of the 11th, and lateral
on the heart. An elevated
black spot on the 11th
rings are on each side
on the 4th, interrupting
the 2 upper of the 3
lateral black stripes.
Thoracic legs red; [illegible]
[illegible] reddish orange

Dryophilus Angustus
Cat 6 Cam

5 Saturdorra Head oval, smooth, depressed at top. A long keel on 4th seg. terminating in the posterior tufted whorl to: a pointed elevation on 11th seg. Last feet little and ✝ leg. to pale ~~[illegible]~~ unpolished with some pale ~~[illegible]~~ marbled with dark green on each side of segments 12, 2 in a large patch and smaller patch on the back lying on segment 8 (9) in the form of a chevron and shaped dark green later on 9 and ending about the 8th and on 11th. Sit below the cuticle





down the side at 9. Body also blotched with dark brown on the keel on 4th seg. in 1 & 2 may be seen on 4 a tower to the green patch and below the dorsal gap patch on the ordinary segs 7, 8, 9 blackish patch on each side of 6. Several white spots in a circle around the abdomen of 10 ~~[illegible]~~ great matter, [illegible] ~~[illegible]~~ ~~[illegible]~~ ~~[illegible]~~ ~~[illegible]~~ ~~[illegible]~~ Head white to white to most yellowish and brown tinged in front. Heart-shaped inward so as to divide the surface into white spots, 2 above, two arranged in the centre

TUESDAY, OCTOBER 24, 1876.

and [illegible] pasture and
a space above white.
Also some bronzed
mottling on leaves with
a band of bronzy then
general color into about 6
habit of [illegible], pretty
confluent. X 7 cf. white
with a brown [illegible] above
the [illegible]. Flower on 9th
[illegible] horizontally, brown
the [illegible] on 10-11
black
Pupa 7 Feb '89 shining light
brown, darker to [illegible]
fed. Sep (See Sept 14)
Common Temple [illegible], [illegible]
Coelodera & Heterospilus, in leaves [illegible]



WEDNESDAY, OCTOBER 25, 1876.

[illegible] Feature large
[illegible] on 4th long 2 pointed
on 8. 2 humps [illegible] forming
on 11 two short [illegible]
2 white elevated spots on
4 [illegible] 7 & 9 [illegible] on 7 [illegible]
[illegible] redish brown
[illegible] on back
each side of 23 [illegible]
[illegible] on
[illegible] 4, 5, 6, 7 [illegible]
long, white [illegible] a [illegible]
spot in middle on 6. White
[illegible] on 9 & 10 [illegible]
V pointed [illegible] marked
[illegible] a red [illegible] and a
[illegible] white [illegible] on 10

Hemp, tipped with scarlet
Beneath a yellowish
band. Spread out
black hairs. Hind
light brown with 4
black bars alternate
with 4 brownish ones
the middle three running
half way from the top
down the back
to form web under ground
Still Feb. 1889. Papa long &
slim 1 gram. mahogany red
darker black bit, orange
at base & thorax. 2 cremaster
tips diverging thorn like
branch pointing inward
Thorax & granular elevation





6 June 1 1876 — Head rounded
[illegible] [illegible] in cut
above, partly beneath
clypeus [illegible] 2 eyes: pale
whitish, with pale dusky
Body semitransparent white
green: a dotted white
line edged blackish to
above: on each segment an
oblique blackish shade
running back from base of
and terminating in a white
point on the rings: segment
three points form two
[illegible] and more, then on
[illegible] 11 being nearer together
and [illegible] than the other
[illegible] any point on another

SATURDAY, OCTOBER 28, 1876.

larger than the other segs. An uninterrupted dorsal black stripe with white points nearly in the form of short vertical bars.

Prot. Hel. & 22 Same. Head almost entirely black above. The dorsal line is merely traced by a white small stripe edged with black below on both sides. In fact it seems, there being scales between the segments. The color of the body is a dull green, less tremulous.



SUNDAY, OCTOBER 29, 1876.

vertebrate below. There is a row of small white dots on per seg. above the spiracles, and another similar one between the dorsal & ventro-dorsal. Each dot of each row furnishes a short white hair. The 2 segs on 11th seg. are quite conspicuous spiracular blacks. Strong mouth with hook. Head not wide. The anal horn is short, its least rounded, it last seg. is not attenuated or acute. Varied food. Smooth all night. 23 mm

Entered on Oct 3

MONDAY, OCTOBER 30, 1876.

Pupa (May 8) Similar to
ministra, punctured,
wing cases wrinkled
Cremaster double
very short, the spines
arising almost imme-
diately from the body,
3 to each part, the
middle one much the
shorter, almost obsolete,
making the spines
divergent. Same color
as D. ministra.

Datana falcula



TUESDAY, OCTOBER 31, 1876.

J. pudens. June 14, 1869.
On corona floridae
Head white mottled
with the brown white & black
spots, the covering the
eyes and the upper side
the summit of the head
Short white hairs
Body semitransparent,
white flecked with
opaque white spots
on the dorsum &
more thickly on the ventral
Stigmatal space covered
by a black shading
more distinctly anteri-
orly and a dense

dorsal fin. Spinal
pale brown, cervical
spot white tinged, covered
dos with body on
which are a few
short pale hairs
folded up & lay
(pre imaged)
the elongated & curved
a bowline, spinning the
edges together. In
this long remain when
not feeding but do
not cast it. Feed
at night.
Single brood. Female
chiefly in winter.







Friday June 14, 1889. Brown
Body pale yellowish variegated
with blackish & black dorsal
line interrupted on the
anterior of the posterior
rays. 4 longitudinal rows
of warts, subventral, (5) (6?) (3) angular
stigmatal (1) (2) & subdorsal
the subventral furnishing
long silky white hairs, + a few black
~~except last segment which~~
~~forms 2 long thin black~~
~~tufts of hair. Tufts of white~~
~~& few feathery white hairs~~
The angular stigmatal rows
furnish short brilliant yel-
lowish hairs but on joints 2

FRIDAY, NOVEMBER 3, 1876.

& 13

1 giving a long pencil (broad
legs (each side) a few blade hairs
also overhang the breast
& extend from joints 13.

Lower Subdorsal row (2) of warts on
joints 2-4, 8-11, & 13-13 furnished
tufts of plumed white
hairs, appearing as if the
ends were minutely intermixed
with brisly yellow
hairs. & the upper subdorsal
row the same on joints 2
3, 4 & but with less hairs
the upper subdorsal row
very obsolete on the posterior segments. On
joints 5, 6, 7 & 12 the two



SATURDAY, NOVEMBER 4, 1876.

subdorsal rows of warts give
large square lateral tufts
of plumed hairs, mixed
with white plumed hairs
most at the sides when also
a few of the brisly yellow
hairs occur. Tuft on 7 has
much less blade than the
others. Dorsally on joints 10 & 11
are a pair of whitish retractile warts
with scattered tufts ~~[illegible]~~
only in the red. [illegible] of
Lycopian lacerostigma.
(Oct & Nov 30) Head [illegible]
[illegible] above the mouth
Body pale whitish with a large
[illegible] yellow, shaded & (Nov 5)

with a semi-obsolete white
anal line & broader
subdorsal band,
variegated by white
spots & streaks in the
stigmatal space. Ex.
cells esp. a broad trans
verse bright red band
contrasting strikingly colour
wise. Genitalia long
bristled. The bands
begin above the spiracles
but there is a row of stars
below the spirals & small
spots at base of legs. A
broad row of large
yellow spots in the



subventral space &
between the spirals
separated by red warts
& spiracles robinia. venter
feet black. venter.
& thorax & legs reddish

30B Amsterdam Blattstich 1894 on willow [illegible] a red
A-mark and many confluent white
spots. Black, warts light dirty red
obsolete connected, spiracles black
and tarsus ringed. Traces of a
dist. s-d on s-v (v) white
found the latter straight not
broad, containing large wart v
but not broken. white space
between s-d & s-v streaked
with white, also venter and
a few fine, irregular spots
Ingelfingen May 11 95 A. Allmann

marked diffusedly with black, a dorsal ~~band~~ and stigmatal band indicated. Tail black for lots of hairs on joints 2 and 13 as in previous stage from the dorsal stigmatal row of warts. Lateral hairs long, dirty white mixed with a few black ones under a glass seem to be thinly scattered. Other tufts seem as in previous model except that ~~the~~ joints 4, 6, 7, 8 are now large square brown tufts mixed at the side with white plumed hairs,





the left or first 12 still seemed black as previously & contrasting with the others. ✓

Coon of hair extended July 6

(when taken July 1, 1879) head flattened at the ends, a little depressed at vertex, ~~dark~~ green with black line in the angle between front & sides, shaded with white pustules only & some irregular white spots + a few white hairs in front & at the sides.

Body not reaching vertex of head for joints 2, 3, 4, joints 5–13 inc. have each a dorsal process but somewhat modified in shape on the second joint. There is joints 6 & 12 are the longest & ~~[illegible]~~ attached,





They rise abruptly in front from the entire before the segment, terminate at the top in 2 rounded points of a yellowish color tipped with brown of which the anterior one is the longer & longer, & slope away to the posterior edge of the segment. The other processes are similar in structure (the 2 opposite ones are closer together) & are short & end in a point & become cleft on the dorsal line. This is first distinctly seen on joint 9. where the process on joint 13 ~~[illegible]~~

~~with~~ of 2 short points placed side by side ~~leaving the brown tips~~. Body ~~posterior~~ dorsal green, the anterior space covered by greenish white but leaving the ground color to appear as a dorsal band. An oblique line on each joint ~~slightly from the back posteriorly upward & forward~~. The white color is continued down the sides nearly to the stigmata. A faint fine pale stigmatal line. Spiracles white with brown ~~ring~~ fine black border





On joints 2, 3, 4, 5, 6 & 13 are indications of a dempsed subventral line. Anal feet pale reddish, marked with 2 black lines. Thoracic green with black line. Food elm.

(This spec. died not moult but went in the ground small) Pupa seven shining analogous red punctured. Been water 1 tapering spine with a pair of little curved points at the end almost identical with this July 17 '90. Width head 2.6 mm

Proportion antennae & moth.

MONDAY, NOVEMBER 13, 1876.

In water nearly drowned
Waterloo, July 16. 1889.
Head ~~prairie~~ greyhound green white
2 pale green stripes
edged posteriorly with
a tawny shade. Body
pale green, as from 3 &
4 sparsely distributed
white dots, each surrounded by a fine black
ring. Black spots are
also found on the ventral
a substantial species
Seven oblique lateral
lines on joints 7-12
Her last one is study
from the base of first



TUESDAY, NOVEMBER 14, 1876

N over joint 12 to the
caudal horn. Three
stripes are ~~broad~~ white
~~& half violet~~ shaded
anteriorly with ~~pale~~ dull
caudal horn green,
with a black stripe on
each side this being the
continuation of the pos-
terior oblique lateral
line. Thoracic feet
pale yellowish, tipped
with ~~black~~ Turkish. Spiracles, edge
of first willow (?)

Length about
60 mm

(BB 35 [illegible])

## WEDNESDAY, NOVEMBER 15, 1876.

May 24, '90) As per desc. +
whitening & head absent
[illegible] [illegible] [illegible]
[illegible]. W 1.3
Mouse same. [illegible]
[illegible]. In one [illegible]
2 [illegible] in front,
[illegible] each side of plate
in 12 in all a [illegible] en-
larged white head. 9 mm
Beetle! Mott May 27 Head
2 [illegible] Same. L. 15 mm
Mott June 3 As per desc
Head w. 3 mm [illegible]
[illegible] white with
dark brown oval. (Images Sept 25)
{Scopelosoma moffatiana Grt
{See Pearsall Ent Amer IV 89

(See Sept 25) (BB 72 Cat)
Compare Feb 24 [illegible]
~~[illegible] edge [illegible]~~

## THURSDAY, NOVEMBER 16, 1876.

W 2.2 mm

pale yellow, color [illegible]
brown. Stripes in [illegible], red [illegible]
white band, covering central
suture and sutures of Δ [illegible]
[illegible] way to base. Lateral
[illegible] of [illegible] pale. a few
[illegible] band. Dorsal process of
11, large, thickened at top
granulated there at apex
[illegible]. Body light brown [illegible]
various dorsal dark lines
The line separating the
dorsal coloration from lateral
begins sub-stig on 2–4, runs
upward to near d-line on
then down to just above spi-
racles on 11 & fade into proleg.
Lateral color dark velvety
brown with [illegible] subst. [illegible]
gran. conspicuous. Same color
also in a shade around
dorsal process and below
the obscure s-d line on 3–5
a white substig line on 11 & 12
anal process (6 mm) spines
dark brown [illegible]
with whitish. The feet [illegible]

Female 19. Head dark blue gray animated, speckled with black dots, jaw pale & eyes black, the tones pale & lines black with white & a number of black hairs. N 3 mins. Body, pl 12 slightly enlarged black & a broad white band with smaller ones left & right & a few small red & white. A horizontal orange red line, preceded by a narrow & pale green & followed by a broad powder blue band





A superbly pale orange marbled band, and 5-7 g. blue. Center a little blue. Numerous pale black, ringed with white & black & blue & black & white & black & pale orange. Beneath the lagoon there were numerous from dark to pale opaque. Cervical opth. Pl. 12 with black & opaque. Left it in the dish a short while. Having black hair.

Alder sawfly cont.

SUNDAY, NOVEMBER 19, 1876.

The eggs are laid in slits in the basal half of the leaf stem on under side generally in a double row

Larva lived .8 mm Head shiny yellowish black Body dull ochre yellow marked as in mature larva but less distinct L 6 mm

Larva hdg .4 mm Hd brown eyes black. Body dirty yellow, [illegible] Head without markings. [illegible] Hd brownish L 2.5 mm

Hd .6 mm Hd blackish yellow eyes black. Faint black spot above anus

MONDAY, NOVEMBER 20, 1876.

of thoracic feet & [illegible] are blackish. Length 3 mm

Hd 1.3 mm Hd black. Body as in mature L. 7 mm

mature Hd 1.7 See the 9 after hatching eat little slits in center of leaf. Afterward eat [illegible] holes generally [illegible] in the middle & around the outside.

Intertidal hazel crab (89)
Head round, pointed with horns
in front 2, pale yellowish
marked with black and
as nearly as often black
from behind 2 large vertical
black spots separated
by the central suture;
a large spot on each side of
head behind eyes; a smaller one
before it narrowly
separated from it & 2
from the vertical patch
and to the pale antennae
from the black & pale
width of head 1 mm

very nearly





Body somewhat flattened
Abdomen 7 segments, joints 3 ornate
with 2 lines of fine
raised bristles dorsal pair
also on joints 8, 9, 10 & 12
Carapace white black
directed, curved bristles
with fixed joints arising in
from a yellow mass.
Three rows of warts, one pair
say except ~~[illegible]~~ joints 2 & 3 small
~~[illegible]~~ Outlined lines
below it. Pale stripe and
a fourth small element
with body below
antennal fixed above
bases of legs. All bean

THURSDAY, NOVEMBER 23, 1876.

a few fine white hairs
three left the extremities
very long. Body pale
yellow a black dorsal
black band and a
similar 3d one the
latter seen by a lens
to be broken into spots
forewings obliquely fuscous
within reaching the
extremities. Rods ① & ②
2 inches partly black
partly pale brown,
row ③ ochre. ♀. 12 mm
younger as in nature
but black patch on
eyes is absent, only a



FRIDAY, NOVEMBER 24, 1876.

small spot in D place
and the 2 other marks
are linear, mouth brown
eyes black. No. 7 mm
stout pale greenish yellow
① ② rents black, the
rest concolorous with bod
♀ from 3d line which
in nature turned down
June 24 building up
cells each [illegible] lots
of boards.
younger but yours is
as in nature but more
colourless, in a few
days as in nature.
Well I must.

SATURDAY, NOVEMBER 25, 1876.

Introduced June 22 1890
Opaque, red, subquadrate,
protuberant centrally, lobes pointed outwards,
pale whitish white &
pale brown edges, one
eye, one [illegible] lobe
& smaller [illegible]
above & below the [illegible]
Body deeply incised, bifid
sagittal, feet worn off,
which answered much
as in the Antiidae ①
on 5-12 is 5d sq. out. ② 5-d
③ Inferior ⊲V and 2 Tag
and ⊲VI subventral
small & different [illegible]



SUNDAY, NOVEMBER 26, 1876.

distinguish, all concolor
as white membranes.
Body pale translucent
yellowish, a white s.d.
line below row ②
Rows ② & ③ on 2 and ② on
3 & 4 brown. Strong dorsal
plateles on joints 5, 8, 9
and irregular on 11 & 12
A transition of form
to Sphaerexochus mirus
works. Length 7 lines
including head 7 nearly
[illegible] 4-5 as deep
into the lobe. Lens points
marked as before the
upper margin (See 329)

BB 110 cont'd



but in Dorothy's hand the
needle trembled and
bent, trembled again
the end and the
[illegible] with a hair
those are rather shorter in last
& [illegible] the
feels que [illegible]
known. [illegible]
wine red, finely streaked
(longitudinally) on the
sides with yellow.
Rotaventrally, Aj 3 & 4
the streaks [illegible] on
the dorsum, confluent
in a broad band, or
is
8, 9 & 10 a narrow yellow





line between the bases
of the horns and on
1P a large bright yellow
dorsal patch. Lantern
7 [illegible] had been
Prot'l 2 24 Head sub-
triangular, rotundate in top
dark wine red, smooth and
shining, pale [illegible] black
W. 1 + horns. 1.1 (1 1/4 -)
From [illegible]
of a pair of drooping horns
with small spur at
relatively smaller than
before. Had moulted, and
were longer & more
finely tapering
[illegible] dark wine red

Body black all other horns & thorax pale long & black. Body wine red, finely striated with yellow on sides and also on the base on j 3, 4 & 5 (also interrupted dorsal stripe) also lengthwise on j 8 & 9 (and ending abruptly at end of j 11) & also on j 2, 3 & 27. Head pale dark & also all of j 1 as also j 2 progresses first 2, 3 & 4 become pale green except a narrow dorsal wine red line and the ~~thorax~~ region

Sub median





on 5 6, 8 & 9 & a wooden area on 11, 12 & 13 pale green inside. Small marks on thorax V. & 8 mm Sept 1 Bu 28 Hd parabolic in outline but flat in front & bottom a little at vertex wine red closely covered with little round pale yellowish spots & has a consistent pale. Legs & mouth a shrub pale yellow & rest black with yellow inside the tibia & tarsi & the ~~the~~ ~~the~~ the ~~its~~ sides once indented by the end of second & last abdominal segments

FRIDAY, DECEMBER 1, 1876.

were inoculated, Body
H. elements & connections
locally at j12 increased vol.
eggs. Wards ① enclosure
of this yolk or joint 2,
5-12 ② above & line ③
below it ④ (B) in 5-8
Cody pale of same
number as before.
Vain short Gastric
fine & scant L. 9 mm
Next June 29 lid made
as before the marks over
eyes connected with the
one above it. All covered
redness and with
mottlings between. Jaws



SATURDAY, DECEMBER 2, 1876.

brown, Cords yellow, marks
as before but lines in
central slot outlined in
brown. 5d line wanting
but a trace of it forms
a border to the patch
on 8 & 9. Patch on 12 & 11
larger, fricate in front
narrowly separated from
brown spot over 3d vert.
V. bd. 15 mm (should be
larger as contrasted by
old head blood later)

SUNDAY, DECEMBER 3, 1876.

On poplar (big leaf) June 27 1896. Silver birch web by female on under side. Head pale greenish yellow eyes black. M. ♂ Pulm. Body pale green above darker on dorsum with a broad greenish yellow s-d line. Legs tufted faintly brown tibiae.

MOLT June 29 as before head dull, palpi & mandibles pale green. Mult. pale W. 1.2 mm. Body as before. Length 7 mm.

MOLT July 3 Hd. round



3/7/91

MONDAY, DECEMBER 4, 1876.

Shiny, joints pale. eyes black. M. 1.7 mm. Body ~~[illegible]~~ green with broad s-d yellow line. L 12 mm.

MOLT July 7 Hd. round, Palpi & leg. pale. pale green. Abdomen immediately moulted & pale W. 2.7 Pale leaf green & broad s-d yellow band, on a dark & a broad plate [illegible] a dirty pale, especially at anal seg. When [illegible] terminal segments & tarsi. 10 [illegible] 9 wing fed, left flat. white [illegible] Mult on 2-4

TUESDAY, DECEMBER 5, 1876.

the sutures also
[illegible] are
Dot Forms on joint 2 thence
spread, winding & fan-
tined. Meanwhile branch
as in last stage finally
a black & yellow band
forming a Δ point
down 2, narrowing &
obsolete near on 3 & 4,
widening again on 5, 6, 7 &
on 8 slightly tapering gradually
Dot begins again in the
middle of 9 & widening
on 10 & 11 where it
ends abruptly.



WEDNESDAY, DECEMBER 6, 1876.

excavated so that it
travels in 2 points. It is
very narrowly & faintly
continued on joint 12 & 13
and broadened on both
sides to a broad mid-
ned band which carries
five yellow stripes and
is continued twice down
the first or joints 5, 6 & 7
& 10 strongly.
Nearly the body is
[illegible]
[illegible] 2 has
a stripe [illegible] approaching
Moth 2.6* first & hind wings 3.8**
Another 4 in hickory, Butt
Column 29 90, Head 2.6 29 mm

*greater 2.5, less 3. **3.5+, 4-

THURSDAY, DECEMBER 7, 1876.

Head shaped as before
dorsal horns are indented
band in front pinkish
plate white, paler yellow
the bd. shows a darker
band posteriorly pattern
as before. W 2.1-2.6 Body 3 - Jun
spurred cervical horns
red horns, spurred
& tipped with a hair
only about 1½ mm long
Body leaf green, the
dorsal band yellow
between the horns, clear
white, distinct. It widens
posteriorly to joint 7, narrow
abruptly to a point on 8.



FRIDAY, DECEMBER 8, 1876.

nearly cylindrical, enlarged
dorsally arched at joints 8 & 9
& tapering thence to j 13
anal feet long, not
used usually in walking
begins expanding, widening
till where it divides
into 2 fan to which meet
at the anal plate, enclosing
an elongated oval of the
ground color. Dual leaf
white above, horn below
Three lateral, horn
mottled with yellow
faint oblique on joint
4 & 5, narrow; second
on 7 & fourth on 8 large

SATURDAY, DECEMBER 9, 1876.

extending from pneal
band onto foot 4, 7
takes subventrally;
third smaller on 110,
a little oblique, not
reaching either foot or
dorsal band. Some
minute black specks
over the lateral region
Dorsal surface pale brown
abd with a fine dorsal
band. Length 22 mm]
[†Most perhaps 5/2 by finger
than wide, notched at
vertex, flattened in
front and at sides
hairy mostly at vertex
apex & lower pointed



and becoming white
towards the vertex

SUNDAY, DECEMBER 10, 1876.

Purplish brown, abs-
greenish, the apices of
lobes black. In front
is a broad pink vertical
stripe a little irregular
in outline very narrowly
divided by the clypeus
central denture. Palpi
white, labrum pinkish
jaws black antennae brown
then conical hairs yellow
eyes black. W. 3.3 mm
conical horns also
then there is represented
by a pair of triangular tubercles
bearing a single hair
Body is smaller at

furnished with pores at the end
but there can be seen distinctly
within the ends of the legs

MONDAY, DECEMBER 11, 1876.

points 5 & 6 enlarged
especially at 5 only and
slopes again to 13
anal fort (left) not
straight, neither long,
a white dorsal stripe
finely marginated with
scarlet brown and
contracting in its widest
places at fine double
line, ||| is yellowish
ant. on 1 2, widens on
4, 5 & 6 and ends on
8, begins on 9 yellowish,
widens, forks on 11
the parts converging on
13 and passing onto



especially the upper parts
of the 2 last patches

TUESDAY, DECEMBER 12, 1876.

anal fort not not
meeting. Body top gray
with many small black
dots and 3 purple brown
lateral patches mottled
with cinnamon or pale or creamer
cinnamon, which latter predominates
cinnamon, fins 4 & 5.
upwardly & begins, covering
spinach on 5; second
large on 7 & 8, *covering
fort on 7, not between
spinach on 8. Anal
dorsal normal; tail
on 1 2, covering spinach
dorsally ~~[illegible]~~ obliquely
not on the posterior. anal
fort prominent, triangular

*Sept 20 Hz (3.8 Saturn on 6 & 8

~~Dorsal~~ brown ringed with black, and tipped with brown. Spiracles yellowish centrally, broadly brown outwardly, finally yellowish. As the stage advances a distinct white sub dorsal band appears on joints 8, 9 & 10 tapering at each end, forming a continuation of the widest portion of the dorsal band but narrowed & separated from it or only partly confluent with it. Also a narrow white dorsal line encroaches on the anterior part of the gray





patch formed by the fusion of the dorsal band on joints 11 & 12 while the anal plate between the branches is brown. The fine lines in the white dorsal band become gradually lost, approaching in appearance the numerous bifurcations of the body. On the upper part of the lateral patch a clear color of rose is formed by the confluence of the white dorsal marks. Leave on joints 8 & 9 a green ~~X~~ and on 11, 12 &c

Fine very short hair from minute warts each with a lens

FRIDAY, DECEMBER 15, 1876.

a green which is an rotundata — then the next fr the usual color 2.30 mm. Pupa ready for pupation the color fades to dull purplish in the body. July 7 (the paler lateral marks almost all yellow or cream color) Coon under rubbish or just under surface of a mixture of silk and grains of sand, thin. Pupa cylindrical and slightly tapering. Cremaster is two thirds apart from an elevated base.



SATURDAY, DECEMBER 16, 1876.

Hbs by calc .7 1.1 1.7 2.6 (3.9)
do for mo2† (.5) (.8) (1.3) 2.1 3.3
curving slanting outward and bent back several times like hooks
Body punctured, case smooth, color dark red brown, shining.
Length about 20 mm
width 6 mm
Imago July 26
Cat. no. 5166

cpd

Heteracampa
subrotunda Harris
no = bimdata! (1895)

Egg laid in Watch 9 360
on under side leaf hickory
Cylindrical, the base a
little hollowed, the top
rounded. Pale gray, the
top white with a round
black spot in the center
Diam .6 mm, Height .7 mm
2nd stage Head, c-spot,
anal plates & dorsal patch
black & shining. W. hd. .9 mm
Body pale whitish, with
red brown lines, dorsal
broad, 3 lateral & ventral
the venter on 2-4 all
red brown, leaving 4
lateral & 3 ventral lines





9 ground color, pale and
blendly well separated
W 30 July 17 Hd black
shiny, a few long white
hairs. W. 6 mm. Body
purple red with 4 narrow
obscure paler lateral
lines. Feet, c-spot & anal
plate black. Some long
white hairs, especially
from joint 2.
W left July 26 Hd bright
brown chitin, the sutures
deep, black shiny, minutely
punctured sparsely W 2.7 mm
a few long white hairs
Body dirty purplish

TUESDAY, DECEMBER 19, 1876.

8 + neuter

red, with 4 lateral
fairly interrupted non-
colored lines. Quaint
long white hair
c-spot, anal plate &
legs shining black.
Antl 5 + 1 Hd black
shiny, functional, (4+, 4½)
labium palps W 4.3 mm
Body black, strongly
crackle when wet
very opaque, ~~[illegible]~~ absent
except ~~[illegible]~~ traces of subsetiferous
hair abundant, white
growing from many very
minute tubercles.
c-spot, anal plate, feet



WEDNESDAY, DECEMBER 20, 1876.

8 specimens black otherwise with a pale
central line. Anal feet
represented by short
blunt elevations, Also
feet reddish, venter
entirely ground, freq 5

Dorsal & lateral stripes lost
Pupa cylindrical, abd. non
sexual. Horn tiny, gently
tapering. A large heavily chit
furniture between the eye
tubercles 2 short conical
elevations each with 2 short
diverging spines. Color
dark red brown almost pitch
black on head. Thorax &
body dusky functional, cases
closely but finely wrinkled
L. 12 W. 6.5 mm

THURSDAY, DECEMBER 21, 1876.

[Hmm 5 stages] Spring brood 1890
July 17 differs from above. Hd
blotched, flattened front, lobes
conical, pointed. Segments
dark brown granulated & apex lobes
Sides striated above & pale.
Body trans. wrinkled & gray
blotch dark brown, except
trans. (S.d.S.p.) 3–13 is ochreous
brown, the process on 4 and
5 pale on 8 & 9 dark velvety
blackish brown. Tail trans.
narrowly
annulate with fuller
spinose as is process on 4
Hatched July 22 Hd, belowed
the tips conical, spinose.
Granulated, the granules

Hd 2.2 (See hr 16)



FRIDAY, DECEMBER 22, 1876.

Contents of caterpillar
described.

BB1 Panaxa paterina
2 Acronycta impleta
3 Polyphe dariciis
4 Limacodes scapha
5 Euclea quercetis
6 Phatelodes torrefacta
7 = 86
7 Nasgolpha unguina
8 Acronycta lobeliae
9 Adoneta spinuloides
10,13 Heterocampa manteo
11 Tortricidia testacea
12 Limacodes fasciola
Packardia albipunctata
14 Lymantria melanosia

SATURDAY, DECEMBER 23, 1876.

15 Cerinyeta
16 Nerica dedentata
17 Hemaris
18 Endropia hyperchiaria
19
20 Odemasia hoolia
21
22 Ulmia Kentucke
23 17
24
25 Nadata gibbosa
26
27 Dryopia aurea
28 = 29
29 Grapta interrogationis
30 Apatela oblinita
31 Cucoton pellucida



SUNDAY, DECEMBER 24, 1876.

32
33 Melitaea Phaeton
34 Parargyria clairtonii ?
35 Scopelosoma inflatinea
36
37 Disiremopsis diastria
38 Thyatria pudens
39 Tiola exornata
40 Heterocampa guttivitta
41 Demas propinquilinea ?
42 Enfielbia nibecaria
43 Melitaea Phaeton ?
44 Cacoecia ferridana
45 Grapta vau verdana
46 Odemasia concinna
47 Philosomia nevada
48 Sphinx luscitiosa

MONDAY, DECEMBER 25, 1876.

49 = 57
50 Speotheria Jo
51 Thyreus Abbottii
52 Saturnia [illegible]
53
54 Datana Angusii
55 Ithiocrania acraea (?)
56 Platysamia promethea
57 Dryopia definita
58 Limacodes informata
59 Nannotera confusa
60
61 Papilio ajax
62 = 8
63
64 = 110
65



TUESDAY, DECEMBER 26, 1876.

66
67 Hydria undulata
68
69
70 Datana ~~floridana~~ palmii ?
71 Euapta comma
72 Dryophanta nasa
73 Melitaea Phaeton ?
74 Eugonia alpiaria
75
76 Eclima
77
78 Nannotea adjuncta
79 Cleora pulverularia
80
81 Datana major
82 Harpya multiscripta ?
82 var: Harpya occidentalis

WEDNESDAY, DECEMBER 27, 1876.

83 Limerinthus germinatus
84 Datura ferox
85
86 Harrisimcuma exultata
87
88 Scrophularia bilineata
89 Iphiva undulosa
90 Indopindia antennal
91 Ichthyura albovirgata
92 = 91
93
94
95 Schizanas ipomoeae
96 Centrocera cerogama
97 Pyrophila pyramidoides
98 Euphanisia [illegible]
99 Edema



THURSDAY, DECEMBER 28, 1876.

100 Euplexia lucipara
101 Laodna erastrioides
102 Angerona crocataria
103 Apatela morbifaga
104 Euphisia tridentata
105 Jamacra lignicolor
106
107 Dasylophia anguina
108 Datana contracta
109 Datana Angusii
110 Heterocampa bimaculata
111 Datana major
112 = 104
113 Raphia frater
114 Heterocampa manteo
115 Nadata gibbosa
116 Notodonta stragula

FRIDAY, DECEMBER 29, 1876.

117 Apatela tritona
118
119 Charadra deridens
120 Bolleodasys unicornis
121 Boletobia geminata
122 Arctia anthoela?
123 Eacles imperialis
124 Datana drexelii
125
126
127 Alypia octomaculata
128
129
130
131 Sphinx kalmiae
132 Agaulis vanillae
133



SATURDAY, DECEMBER 30, 1876.

134 Zale lineata
135 Limenitis disippus
136
137
138
139 Arctia docta
140 Papaipema cerne
141
142 Plusia californica
143 Cerura cinereoides
144 Arachnis picta
145 Triptogon imperator
146
147
148 Hyphantria cunea
149 Nola lycaonalis
150

SUNDAY, DECEMBER 31, 1876.

151

152 Eacles imperialis

153 Edema a

154 Eupanthenia scribonia

155 Sphinx ophiomotacellus

156 Endamus pyrtenus

157 Pieris monuste

(For Apatelodes angelica see Aug 21.)